



# Maryland HIE Evaluation Results Report

Prepared for: The Office of the National Coordinator for Health  
Information Technology State Health Information Exchange  
Cooperative Agreement Program

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## INTRODUCTION

This document is Maryland's Health Information Exchange (HIE) Evaluation Results Report (evaluation) under the State HIE Cooperative Agreement Program (cooperative agreement or program) and is intended to meet the requirements in the program information notice issued by the Office of the National Coordinator for Health Information Technology (ONC) on February 8, 2012 (PIN-002). As required under PIN-002, the purposes of the evaluation are to:

- Describe the approaches and strategies used by the State-Designated HIE to facilitate and expand HIE in priority areas (e.g., what key activities of the State-Designated HIE or other stakeholders facilitated the availability of population health management reports for program development?);
- Identify and understand conditions influencing implementation of program strategies (e.g., how did the State-Designated HIE's engagement with hospitals support the strategy to make discharge summary documents available through the HIE?);
- Assess how HIE performance has progressed in key program priority areas (e.g., has the number of laboratory reports available through the HIE increased?); and
- Assess how key approaches and strategies implemented by the State-Designated HIE contributed to progress, including lessons learned (e.g., how did the State-Designated HIE's governance structure contribute to the progress of the encounter notification service (ENS)?).

On December 2013, the Maryland Health Care Commission (MHCC) submitted its HIE Evaluation Plan to ONC outlining a detailed approach for evaluation of the program, including study design and populations, data sources, data collection methods, and analysis to be performed.<sup>1</sup> The plan was subsequently approved by ONC.<sup>2</sup>

### *State-Designated HIE*

In 2009, MHCC and the Health Services Cost Review Commission (HSCRC) designated the Chesapeake Regional Information System for our Patients (CRISP or State-Designated HIE) to build and maintain the technical infrastructure to support a statewide electronic HIE.<sup>3</sup> The long-term goal of the State-Designated HIE is to build the fundamental foundation for interoperability to communicate authenticated data among Maryland physicians, hospitals, and other health care organizations. The State-Designated HIE will also enable communities with service area HIEs to connect to other communities around the State and, in the future, with providers in other states.

The State-Designated HIE is currently in its fifth year of operation and has made continuous progress towards the goals of building a robust statewide HIE. Efforts to make data available to the State-Designated HIE began with hospitals through a phased approach, since hospitals are considered large suppliers of data. Presently, all 46 acute care hospitals and one specialty hospital in the State are submitting clinical information about individual hospital health care encounters, including

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<sup>1</sup> See Appendix A for the Maryland HIE Evaluation Plan.

<sup>2</sup> See Appendix B for ONC approval letter, dated December 17, 2013.

<sup>3</sup> Maryland law required the MHCC to designate a statewide HIE. See Appendix B for Md. Code Ann., Health-Gen. §19-143 Annotated Code of Maryland.

admission, discharge and transfer (ADT) data. Hospitals are at various stages of sharing other clinical information with the State-Designated HIE. Additionally, Quest Diagnostics, LabCorp, RadNet, and American Radiology are sharing data, as well as three long term care facilities encompassing six locations throughout the State.

The State-Designated HIE offers a variety of services to clinical staff to further enable the utilization of electronic health information. Information made available to the State-Designated HIE is accessible for query through an Internet-based portal. The portal includes patient demographics, laboratory results, radiology reports, discharge summaries, operative and consult notes, and medication fill history. CRISP also provides services under the Maryland Prescription Drug Monitoring Program (PDMP), where all Schedule II-V drugs prescribed at any Maryland pharmacy are made available to prescribing providers through the portal. Another service offered includes real-time alerts sent by secure messaging notifying providers when a patient on their patient panel has an encounter with a Maryland hospital. The State-Designated HIE also provides encounter reports, or readmission reports, to hospitals and other organizations. These reports provide demographic and some clinical information regarding patients' intra-hospital and inter-hospital readmissions and are generally used for initiatives aimed at reducing readmissions. Additionally, the State-Designated HIE has recently expanded to offer interstate connectivity to certain hospitals and providers in DC and Delaware.

## METHODS AND LIMITATIONS

The MHCC and CRISP worked collaboratively to conduct the evaluation of the program.<sup>4</sup> Data collected as part of the evaluation have not been audited, and comparisons to other HIEs are not presented. The table below outlines the specific questions that MHCC sought to address in this evaluation. The detailed methods applied to this evaluation are provided within the HIE Evaluation Plan.<sup>5</sup>

| Focus  | Evaluation Questions   |
|--|--|
| <b>AIM 1: Identify approaches and strategies that were used to facilitate and expand HIE in priority areas</b> |  |
| Strategies   | <ul style="list-style-type: none"> <li>What approaches and strategies were used to facilitate and expand HIE in priority areas?</li> </ul>   |
| <b>AIM 2: Describe conditions influencing implementation of program strategies</b>                             |  |
| Governance   | <ul style="list-style-type: none"> <li>What impact(s) did the governance model for HIE have on program strategies?</li> </ul>  |
| Engagement   | <ul style="list-style-type: none"> <li>Collectively, what impact(s) did communications and outreach to practices have on HIE stakeholder engagement?</li> </ul>  |
| Resources  | <ul style="list-style-type: none"> <li>What impact(s) did the resources provided to support HIE implementation have on the program strategies?</li> </ul>  |
| <b>AIM 3: Assess how HIE performance has progressed in key program priority areas</b>                          |  |
| Data Contribution  | <ul style="list-style-type: none"> <li>Has the number of data feeds (e.g., laboratory, radiology, clinical documents) being provided to the HIE by hospitals increased?</li> <li>Are hospitals enhancing the admission/discharge/transfer (ADT) feeds provided; e.g., additional information provided within the ADT feeds?</li> </ul> |

<sup>4</sup> See Appendix C for a letter of support from CRISP.

<sup>5</sup> See Appendix A for the Maryland HIE Evaluation Plan.



| Focus   | Evaluation Questions   |
|---|--|
| Patient Care Summaries  | <ul style="list-style-type: none"> <li>Have the number of discharge summary documents provided by hospitals to the HIE increased?</li> </ul>   |
| Laboratory Results  | <ul style="list-style-type: none"> <li>Is the number of lab reports from hospital being made available to the HIE increasing?</li> <li>Are the number lab reports from LabCorp and Quest being made available to the HIE increasing?</li> </ul>  |
| Adoption and Use  | <ul style="list-style-type: none"> <li>Is the adoption of the below HIE services increasing among health care providers? <ul style="list-style-type: none"> <li>ENS</li> <li>Query Portal</li> <li>Direct</li> <li>CRS</li> </ul> </li> <li>Are the number of queries of the HIE portal increasing?</li> </ul>   |
| Hospital Re-admission Reports   | <ul style="list-style-type: none"> <li>Has CRISP provided re-admission reports to HSCRC and hospitals at least quarterly?</li> <li>Has CRISP worked with the above entities to refine the quarterly report to meet the needs of the entity?</li> </ul>   |
| Value, Usability, and Reliability   | <ul style="list-style-type: none"> <li>Are HSCRC and hospitals being provided with both timely and accurate re-admission reports?</li> <li>Is the number of found documents from provider queries increasing?</li> <li>Are managed care organizations being provided with both timely and accurate hospital encounter (i.e., admission and/or discharge) reports through ENS?</li> </ul> |
| <b>AIM 4: Assess how key approaches and strategies contributed to progress and identify lessons learned</b> |  |
| Elements of success   | <ul style="list-style-type: none"> <li>What impact(s) did program strategies have on program progress?</li> </ul>  |
| Lessons learned   | <ul style="list-style-type: none"> <li>What lessons, if any, did the program learn that are relevant to future efforts to advance HIE?</li> <li>How will those lessons be incorporated into the program strategies going forward?</li> </ul>   |

## FINDINGS

### **Aim 1: Identify approaches and strategies that were used to facilitate and expand HIE in priority areas**

The approaches and strategies use to facilitating and expanding HIE was driven by the goal to advance the health and wellness of the population by deploying health information technology solutions adopted through cooperation and collaboration. Early on, the MHCC, CRISP staff and CRISP board members recognized that a key challenge to progress in establishing a statewide HIE is that necessary participants have complex business relationships that are in some cases competitive. A strategy was developed to focus on areas that participants could agree were non-competitive, while acknowledging that the organizations would compete in other ways. This strategy has served the HIE effort well, as all Maryland and most D.C. hospitals now participate in CRISP; and more than half of Maryland's population is enrolled in encounter notifications.

The statewide HIE effort has also proceeded using an incremental approach where some of the initial service offerings have been designed to be relatively less controversial from a policy or legal

perspective than other potential services, and focus on the most basic, existing data and technical capabilities of most health care organizations. For instance, an initial request of all hospitals in Maryland was to share admit-discharge-transfer (ADT) data with the exchange, which is a relatively simple project for hospitals to implement. This basic data would eventually be incredibly useful, leading to investments in the encounter notification service, which has since been adopted successfully in a number of other states.

Stakeholders in Maryland's HIE recognized that strong support from the private sector and the State's elected leaders and policy makers was crucial to success. The vision and commitment of the Governor and Secretary of Health helped to set priorities and reduce barriers to adoption and expansion. Additionally, the State-Designated HIE has adopted a "public utility" model of operation, where it seeks to leverage technology assets to serve public health use cases that are of high value to the State. These use cases include the State's prescription drug monitoring program (PDMP), the provider directory established in support of the Maryland health benefits exchange, and Master Patient Index services provided to the all-payor claims database. This approach has helped to diversify the funding mix for the State-Designated HIE, as State and Federal funds have been invested alongside fees collected from hospital participants.

## **Aim 2: Describe conditions influencing implementation of program strategies**

### *Governance*

A broad governance structure was established in Maryland to balance the interests of a range of participants and stakeholders. The initial structure included policy and regulatory oversight from MHCC and its HIE Policy Board, the fiduciary and organizational leadership provided by the CRISP Board of Directors, and the broad community input afforded by CRISP's multiple Advisory Board structure. This structure reflected the financing that was in place at that time and included representation from the HIE participants, largely hospitals. As the HIE's role as a public utility evolved and expanded, participation in the HIE governance has expanded. For instance, in 2013, additional representation was added to the CRISP Board of Directors from State health plans and State public health officials, a reflection of CRISP's engagement in new State government-sponsored projects.<sup>6</sup> While there are risks to a broad approach to governance, such as difficulty in reaching consensus, the governance approach in Maryland has been a meaningful driver of the HIE success to date and has allowed diverse stakeholders to collaborate effectively.

### *Engagement*

Over the past several years, CRISP has been working with participating hospitals, health plans, and State medical societies to promote health information exchange in the health care community. Initially, it was a challenge as a new organization to reach the health care community and gain traction and recognition. Early on, CRISP's team traveled throughout the State to present to individual organizations and potential users, such as ambulatory providers and hospitals; it also participated in medical society events and conferences to help raise awareness about HIE more broadly. The outreach and engagement has often been a slow and uneven process. Over time

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<sup>6</sup> See Appendix D for a list of CRISP's Board of Directors Members

through its outreach, CRISP learned that some of the off-the-shelf services that were being offered by the HIE technology vendor community and employed by CRISP did not meet the greatest needs or align well with the workflows of many of the intended users. CRISP has sought to adjust course and refine its service offerings to better reflect the needs of various user types. In the last six months, the awareness building that was undertaken over the prior several years begun to be realized; the launch of CRISP's PDMP has been met with high demand and strong word-of-mouth among eligible users. Since the launch of PDMP in mid-December 2013, CRISP has enrolled more new users than it did in all of calendar year 2013.

### *Resources*

Maryland had an advantage that many states did not have when it started its work under the cooperative agreement, as Maryland had already begun planning for its statewide HIE and secured an initial \$10 million in funding prior to the American Recovery and Reinvestment Act in 2009. This advantage allowed the State-Designated HIE to build momentum and establish a commitment to collaboration among State and private-sector stakeholders prior to the commencement of the cooperative agreement. Federal resources allowed Maryland to invest more aggressively and rapidly in the core technology required to stand up its HIE services. The Federal funds also provided reassurance to State and private-sector participants that CRISP would have the resources to establish the statewide HIE and develop a sustainability model as it sought to deliver sufficient value to the participants who would eventually provide financial support.

### **Aim 3: Assess how HIE performance has progressed in key program priority areas**

#### *Data Contribution and Patient Care Summaries*

Hospitals provide clinical data feeds to the State-Designated HIE in the form of laboratory results, radiology reports, and other clinical documents, such as operative and consult notes. Since December 2011, the number of hospital data feeds supplying these documents has more than doubled from about 40 to about 99 in December 2013, out of a total of about 137 potential hospital data feeds.<sup>7</sup> This clinical information is made available through the Query Portal for access by registered providers participating with CRISP—helping eliminate time spent faxing and/or calling other providers for this information. Increasing accessibility to these critical care documents enables providers to have more complete patient health records so they can better coordinate their patients' care.

In April 2011, HSCRC mandated that all Maryland acute care hospitals submit primarily demographic data on hospital admissions to the State-Designated HIE. By December 2011 all acute care hospitals were providing HSCRC with ADT information using CRISP. The number of ADT messages that hospitals are submitting to CRISP has grown from about 3.1M in October 2011 to about 4.9M in December 2013, an increase of approximately 56 percent. Health care providers can access ADT information through the Query Portal or sign up to receive automated alerts through CRISP's ENS. To receive alerts through ENS, health care providers must register with CRISP and submit a listing of their active patient panel, which includes those patients seen within the past 18 months; as of December 2013, subscriptions accounted for approximately 3M patients. By providing real-time

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<sup>7</sup> See Appendix E page 49 for details regarding individual hospital clinical data feeds.

information about a patient's hospital encounters, ENS enables providers to more efficiently manage their patients' transitions across different health care settings. Upon receiving an ADT notice, a provider may follow-up with the hospital to provide necessary medical information about an admitted patient; they may also contact their patients upon discharge to ensure appropriate follow-up care.

The original ADT data elements included: first name, middle initial (if available), last name, street address, city, state, date of birth, gender, social security number (if collected), visit or encounter ID, medical record number, enterprise or system level ID (if applicable), admission timestamp, and discharge timestamp. The MHCC and CRISP has worked with hospital chief information officers and chief medical informatics officers to enhance the information included in ADT data feeds and many hospitals now add the reason for admission and discharge disposition. As of January 2014, 19 hospitals were including the admission reason, and 36 hospitals were including the discharge disposition.<sup>8</sup> These new data elements are intended to provide additional context for providers about a patient's hospital visit, such as the nature and urgency of their visit including the potential need for follow-up and care coordination as well as information on whether the patient was discharged to another facility or their home.

### *Laboratory Results*

Laboratory results are submitted to the State-Designated HIE by hospitals, LabCorp, and Quest Diagnostics; the number of laboratory submissions has increased since October 2011. Prior to the State-Designated HIE, providers would need to establish interfaces or hospital portal access with each hospital in order to access individual hospital laboratory results; or develop results delivery interfaces with LabCorp and Quest Diagnostics. Initially the State-Designated HIE intended to provide the interfaces that would allow for laboratory results deliver. This proved to be very costly and not scalable to all providers, particularly the small ambulatory practices. Instead, the State-Designated HIE opted to offer registered providers participating access to laboratory results via the Query Portal, which can potentially reduce duplicative or unnecessary testing. The number of laboratory results submitted to the State-Designated HIE increased by about 63 percent over a 27-month timeframe, from approximately 910,699 in October 2011 to about 1,484,603 in December 2013. Starting in October 2013, CRISP began assessing trends in laboratory submissions broken out by hospitals and LabCorp. Data indicates that about 98 percent of the laboratory results available in the State-Designated HIE are submitted by hospitals. The remaining two percent of laboratory results are submitted by LabCorp; LabCorp and Quest Diagnostics only submits results from ordering providers who participate with CRISP.

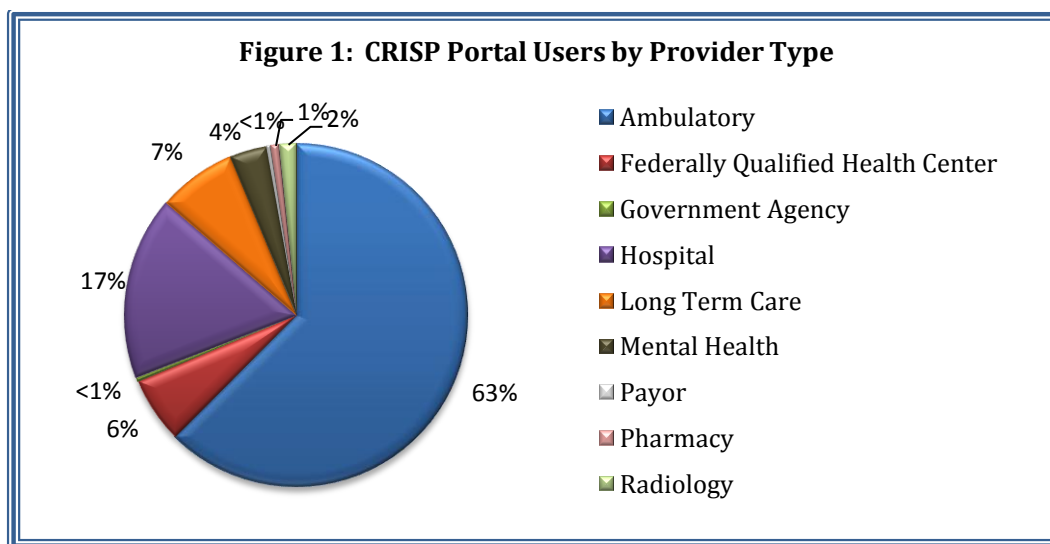
### *HIE Adoption and Use*

Adoption and use of HIE services continues to steadily increase among health care providers. Growth in HIE services enhances care coordination by better facilitating more timely electronic access to clinical information through features such as the Query Portal, ADT alerts through ENS, and the use direct messaging for secure email communication. Query Portal adoption has risen steadily

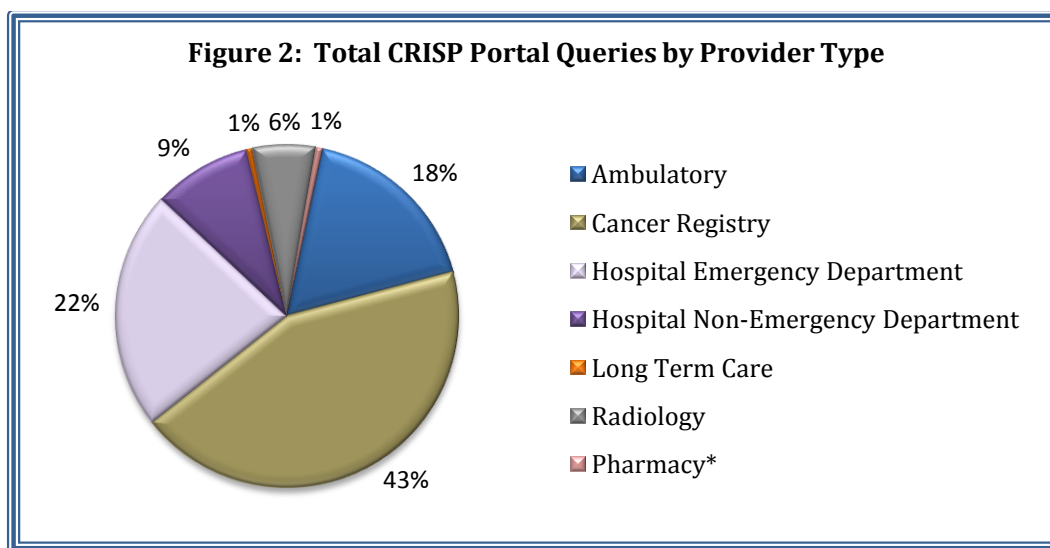
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<sup>8</sup> CRISP HIE participants available at: <http://crisphealth.org/FOR-PROVIDERS/Participating-Providers>.

since it was first launched in September 2010, and as of December 2013, about 256 users were registered.<sup>9</sup> Ambulatory providers make up the largest proportion of registered users with Query Portal access at 63 percent, followed by hospitals and long-term care facilities as detailed in Figure 1 below.



The number of portal queries has also increased despite some fluctuations overtime, from approximately 773 queries conducted in November 2011 to about 16,231 in December 2013.<sup>10</sup> The largest proportion of queries is conducted by cancer registries, followed by hospital emergency departments and ambulatory providers, as detailed in Figure 2 below.



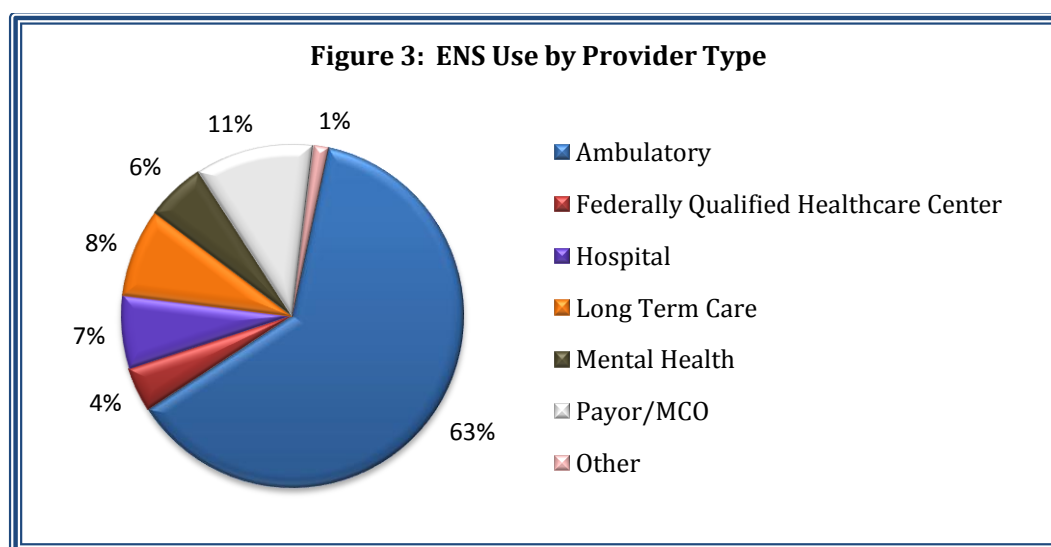
\* Pharmacy data available beginning in October 2013

Use of ENS has increased as well since the service was first launched in August 2012 with about three organizations receiving alerts to about 72 organizations in December 2013; ambulatory providers

<sup>9</sup> See Appendix E page 33 for adoption rates by month for the query portal.

<sup>10</sup> See Appendix E page 35 for the number of queries by month.

make up the majority of ENS users at about 63 percent, as detailed in Figure 3 below.<sup>11</sup> The number of monthly ENS alerts generated has also increased, from about 8,085 in January 2013 to about 161,705 in December 2013, a twenty-fold increase. Direct messaging accounts, used by providers to access ENS alerts and exchange clinical documents securely between two entities, have increased since April 2012 to approximately 218 accounts as of December 2013.<sup>12</sup>



### *Hospital Re-Admission Reports*

Since early 2012, the CRISP Reporting System (CRS) has provided quarterly hospital re-admission reports to HSCRC at the patient level, which includes at least the following fields: MPI number, hospital/facility ID, medical record number, admission date, and discharge date. These reports are valuable as HSCRC uses them to evaluate and address unnecessary hospital re-admissions. CRS relies basic ADT data from hospitals to create and maintain these reports. As CRISP receives real-time HL7 ADT data from hospitals, a copy is then routed and stored in the CRS transactional database.<sup>13</sup> From that database, ADT data can be extracted from various time periods and processed to produce consolidated reports detailing in-patient encounters, emergency room encounters, and other utilization data for the entire State. CRS was launched in August 2012 with re-admission reports being developed for 23 hospitals; as of November 2013, re-admission reports are now being distributed to about 38 hospitals. CRISP provides these reports to hospitals on a quarterly basis.

Prior to the State-Designated HIE, hospitals were only able to track intra-hospital re-admissions. Hospitals now receive inter-hospital re-admissions reports from CRISP to help improve patient care and promote informed planning. Data is aggregated and de-identified within these reports, unless a

<sup>11</sup> See Appendix E page 38 for adoption rates by month for ENS.

<sup>12</sup> See Appendix E page 37 for adoptions rates by month for Direct.

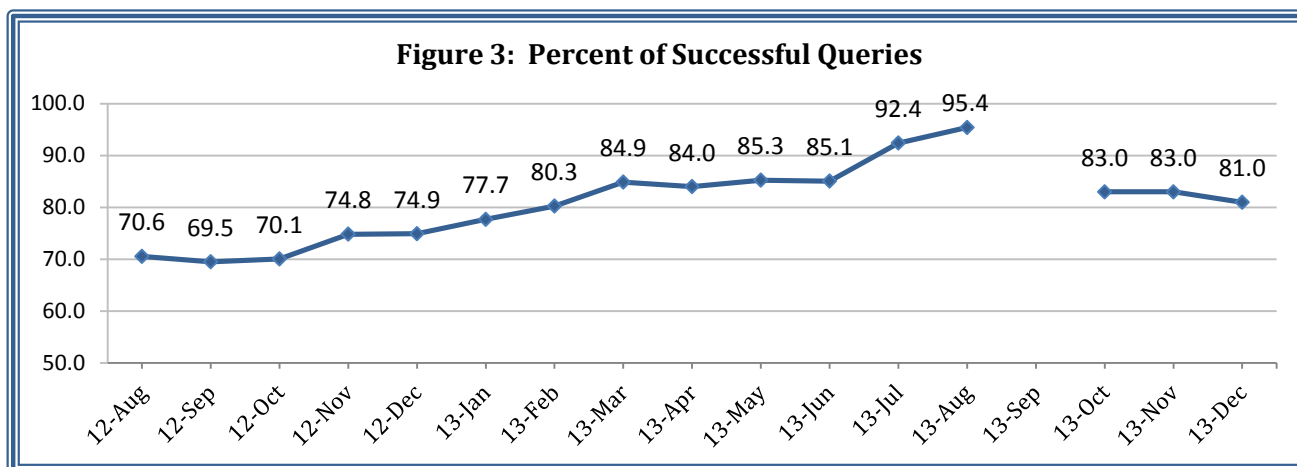
<sup>13</sup> Only those ADT encounters that match at least 90 percent with encounters reported by hospitals to HSCRC are used for the CRS.

patient has an encounter with the receiving hospital. CRISP works with each hospital recipient in an effort to provide reports that are customized to meet their needs. For example, CRISP can provide detailed information regarding 30-day re-admissions to another hospital, by hospital size and distance from a target hospital; CRISP can also provide bounce-back reports that identify patients with an emergency department visit following an outpatient discharge. As of January 2014, CRS reports were also being sent to the Department of Health and Mental Hygiene (DHMH) for further distribution to all 24 local health departments in Maryland. DHMH and local health departments use CRS reports to address hospital re-admission rates from a population health perspective and implement changes within the health care system at a broader community level.

### *Value, Usability and Reliability*

The State-Designated HIE has worked to ensure that hospital re-admission reports provided to HSCRC and certain hospitals are both timely and accurate. In coordination with hospitals and HSCRC, CRISP identified key patient demographics that hospitals must provide in order to allow for accurate patient matching of hospital encounters. The data provided enhances the MPI to allow for tracking encounters across hospitals. CRISP ensures the accuracy of the data before reports are generated for any one hospital. The benchmark used to determine whether to send a report to a hospital is based on how effectively real-time ADT data match up against encounters reported by hospitals to HSCRC. CRISP looks at prior periods to more accurately make this comparison. Once ADT encounter logic reaches the 90 percent range for a given hospital, CRISP will then distribute the report. Beginning in early 2014, hospitals will also begin to report quarterly encounter data to HSCRC, and it is anticipated that more hospitals will reach the 90 percent match threshold and begin receiving re-admission reports from CRISP.

CRISP's query portal is only valuable if relevant patient information is available and can be easily located. While the relevancy of patient information found is not easily measurable in terms of assessing its value, CRISP is able to track the query portal success rate by identifying the number of queries where patient information was retrieved using query portal. On average, about 80 percent of all queries results in patient information being found. The percent of successful queries has increased from 71 percent to about 81 percent between August 2012 and December 2013. As more data continues to be shared with the State-Designated HIE, the number of successful queries is expected to increase. The table below illustrates the percent of successful queries by month.



Note: Information regarding successful queries was not available in September 2013 due to the transition to a new portal vendor.

ENS, when used effectively, can be a valuable tool for managing patient care. Managed care organizations (MCOs) have a vested interest in utilizing ENS as it better informs care teams about their patients' hospitalizations so they can intervene much quicker than through existing insurance claim based notifications services. ENS supports responsive case management by facilitating communications between hospitals, primary care providers, and care managers, helping reduce re-admissions, improve quality, and decrease costs. Approximately eight MCOs are receiving hospital encounter messages through ENS, which accounts for about 11 percent of the organizations utilizing ENS. Most of these MCOs manage the care of Medicaid and/or Medicare patients in Maryland. These reports are provided in a manner that is requested by the MCO either in real-time or on a daily basis. MCOs have their own internal workflows for processing the reports and using them to meet their patient care management needs. The accuracy of the report is based on the ADT data received from hospitals. MCOs report that the notifications allow them to have accurate demographic information on their patients in order to contact them to schedule follow-up visits within hours of their discharge or even intervene while a patient is in the hospital.

#### **Aim 4: Assess how key approaches and strategies contributed to progress and identify lessons learned**

##### *Elements of Success*

The program strategies described under Aim 1 regarding governance, engagement, and resources, have been generally successful to date. In particular, the decision to focus on areas where stakeholders agree to collaborate, to remain incremental, and to diversify the funding model, have allowed Maryland and the State-Designated HIE to build and expand HIE quickly over the past four year. The strategy of leveraging legislation to imposing requirement on all hospitals in Maryland to transmit at least baseline encounter data to the HIE also proved to be a key component of success, as it: 1) signaled to the health care industry that goal of establishing the HIE as core healthcare infrastructure in the State as a tool for improving the cost and quality of care, and 2) it created the possibilities of establishing novel service offerings, including the encounter notification service and a range of reporting capabilities, which were not foreseen as parts of the state HIE plan in the beginning.



## *Lessons Learned*

Providing electronic laboratory and radiology report delivery to ambulatory practices was a service offering that CRISP thought would be core to its business model. Many other HIEs perform this function at the state or regional area. As CRISP began to offer this service in the market, it was discovered that the practices, which had already gone electronic, were generally already receiving electronic results. Those that did not have electronic results delivery were challenged by the cost of implementing the interface. The economics of results delivery provided statewide was not feasible in Maryland. Instead, the State-Designated HIE worked to ensure that laboratory and radiology reports were made available through the Query Portal. The lesson learned from this experience was the value of assessing a potential service and knowing when and how to be flexible enough to transition away from it when there is low market feasibility.

Addressing patient privacy and building consumer trust is vital to the ability of any HIE to offer its services. Strong patient privacy controls, including the ability to efficiently track usage of the system, are important safeguards for patients. As the number of health care professional accessing information through the HIE grew, concerns regarding the increase likelihood of potential misuse focused CRISP's effort on keeping pace with the changing expectations of protecting patient information and improving their processes and protections on a continual basis. We have learned that the scalability of privacy controls must keep pace with the plans for scaling the infrastructure and technology itself.

## **REMARKS**

Payors, employers, hospitals and patients all derive benefit from the widespread adoption and use of health IT, in particular HIE. Through the funding and support provided by ONC and Maryland stakeholders, the State-Designated HIE has experienced significant growth over the last several years. Continued diffusion of HIE is still needed in key areas such as small ambulatory practices, the long-term care community, and to health consumers. The State is dedicated to continuing its efforts to expand the adoption and use of HIE and looks forward to supporting efforts to leverage the State-Designated HIE in innovated ways to improve population health, increase patient satisfaction, and reduce health care costs.

# **Maryland HIE Evaluation Plan**

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Prepared for:

Office of the National Coordinator for Health Information Technology

State Health Information Exchange Cooperative Agreement Program

**Maryland HIE Evaluation Lead: Angela Evatt, Division Chief of Health Information Exchange**

**Maryland Health Care Commission**

**December 2013**

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## INTRODUCTION

This document is Maryland's Health Information Exchange (HIE) Evaluation Plan under the State HIE Cooperative Agreement Program (cooperative agreement)<sup>14</sup> and is intended to meet the requirements in the program information notice issued by ONC on February 8, 2012 (PIN-002). As required under PIN-002, the purposes of the evaluation plan are to describe the approaches and strategies used to facilitate and expand HIE in Maryland, identify conditions that support or hinder implementation of those strategies, and assess HIE performance in key program priority areas, including adoption and use of HIE under the cooperative agreement.

The Maryland Health Care Commission (MHCC) was awarded \$10.9 million under the Office of the National Coordinator for Health Information Technology (ONC)'s cooperative agreement. The purpose of this award is to develop, implement and facilitate HIE in Maryland. The cooperative agreement is being carried out in Maryland through a collaborative approach between MHCC, the Chesapeake Regional Information System for our Patients (CRISP), the State-Designated HIE<sup>15</sup>, and other health care stakeholders. The primary purpose of the State-Designated HIE is to implement a clinical data sharing utility that ensures consumers have access to the highest quality, most efficient, and safest care by giving providers access to the patient data across institutional boundaries and providing physician practices access to the right information at the right time. HIE services will facilitate the secure exchange of health information between Maryland's health care organizations, providers, public health agencies and consumers according to nationally-recognized standards where available. The evaluation plan is divided into seven sections, which includes the following components:

1. A description of the current activities of the HIE and achievements to date, HIE priorities established under the cooperative agreement, and strategies implemented to achieve these priorities;
2. Information regarding evaluation stakeholders;
3. An overview of the aims of the evaluation;
4. The overall approach for the evaluation, including what the evaluation will measure and how measurements align with the aims of the evaluation;
5. A description of the evaluation design, including data collection methods, sources, and analysis methods;
6. Information regarding plans for dissemination of the evaluation findings; and
7. A detailed timeline for evaluation plan implementation.

## 1. PROGRAM DESCRIPTION

### *State-Designated HIE Landscape*

The State-Designated HIE began receiving information from data providers in September 2010. Efforts to make data available through the State-Designated HIE began with hospitals through a phased

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<sup>14</sup> This amount includes the \$1.6M received under the HIE Challenge Program.

<sup>15</sup> CRISP was designated by MHCC and Health Services Cost Review Commission (HSCRC) and as Maryland's statewide HIE in August of 2009, following a competitive application process. CRISP is a non-profit organization, multi-stakeholder group consisting of Johns Hopkins Medicine, MedStar Health, University of Maryland Medical System, Erickson Living, and more than two dozen other stakeholder groups.

approach, as hospitals are large suppliers of data. Presently, all 46 acute care hospitals in Maryland and one specialty hospital are sending data about individual health care encounters, such as admission, discharge and transfer data, to the State-Designated HIE. Hospitals are at various stages of sharing clinical information, such as laboratory results, radiology reports, and clinical summaries, with the State-Designated HIE. Additionally, Quest Diagnostics, LabCorp, RadNet, and American Radiology are sharing data with the State-Designated HIE. Three long term care facilities that encompass six locations are sending encounter data to CRISP.

The State-Designated HIE is offering a variety of services to enable the consumption of electronic health information. Information made available to the State-Designated HIE is accessible for query through an Internet-based portal, which includes patient demographics, laboratory results, radiology reports, discharge summaries, operative and consult notes, and medication fill history. As of October 31, 2013, there were about 179 health care organizations that are using the portal and the average number of portal queries in 2013 is roughly 13,208 per month. Pharmacies operating in Maryland are required by regulation to support e-prescribing, and according to Surescripts more than 93 percent of pharmacies in Maryland support e-prescribing. Additionally, according to the 2011-2012 Maryland Board of Physicians licensure data, about 63.8 percent of office-based physicians report using e-prescribing technology. While the State-Designated HIE does not offer an e-prescribing solution, CRISP is working to provide medication refill history from Surescripts for providers through the portal.<sup>16</sup> Additionally, the portal includes information about the prescribing and dispensing of controlled dangerous substances to certain providers as part of the Prescription Drug Monitoring Program (PDMP). The State-Designated HIE also offers real-time notification, through its encounter notification service (ENS), through secure messages to providers when a patient on their patient panel has an encounter with a Maryland hospital. As of October 31, 2013, there are about 44 organizations receiving these messages, which are generally used to coordinate care and facilitate post acute care follow up. The State-Designated HIE also provides CRISP report services (CRS), or readmission reports, to about 36 hospitals. These reports provide demographic and some clinical information regarding patients' intra-hospital and inter-hospital readmissions and are generally used to inform population health initiatives aimed at reducing readmissions.

### *Program Achievements*

Key program achievements are identified in the table below, organized by date beginning with the date in which the HIE went live:

| Achievements  | Date           |
|---|----------------|
| <ul style="list-style-type: none"> <li>All 46 Maryland acute care hospitals signed letters of intent to connect to the State-Designated HIE within two years</li> <li>The State-Designated HIE went live with five hospitals in Montgomery county, two national laboratories, and three national radiology centers</li> </ul> | September 2010 |
| <ul style="list-style-type: none"> <li>CRISP launched query portal pilot</li> </ul>   | September 2010 |
| <ul style="list-style-type: none"> <li>All 46 Maryland acute care hospitals are connected to the statewide HIE providing admission, discharge and transfer data</li> </ul>  | December 2011  |
| <ul style="list-style-type: none"> <li>CRISP launched Direct Secure Messaging service</li> </ul>  | May 2012       |
| <ul style="list-style-type: none"> <li>CRISP launched Encounter Notification Service</li> </ul>   | August 2012    |

<sup>16</sup> This services was provided previously, but is temporarily on hold due to CRISP's transition to a new HIE vendor.

|   |               |
|---|---------------|
| <ul style="list-style-type: none"> <li>• Maryland Medicaid receives CMS Medicaid funding for HIE related services</li> </ul>    | November 2012 |
| <ul style="list-style-type: none"> <li>• Query portal reached 10,000 queries per month</li> </ul>                               | January 2013  |
| <ul style="list-style-type: none"> <li>• 100 organizations adopted query portal</li> </ul>                                      | March 2013    |
| <ul style="list-style-type: none"> <li>• Identities in the master patient index (MPI) reached 5 million<sup>17</sup></li> </ul> | May 2013      |

### *Program Priorities and Strategies*

The table below outlines priorities identified by Maryland and approved by ONC under the cooperative agreement, and those that are ONC required, which aim to ensure that providers have options to meet the HIE requirements of Stage 1 Meaningful Use.<sup>18</sup> The table includes the strategies implemented by the State-Designated HIE to achieve these priorities. Also detailed below are specific outcomes that are expected to result from the strategies deployed, which will be measured under this evaluation plan. The inputs listed include information that will be collected to measure the outcomes.

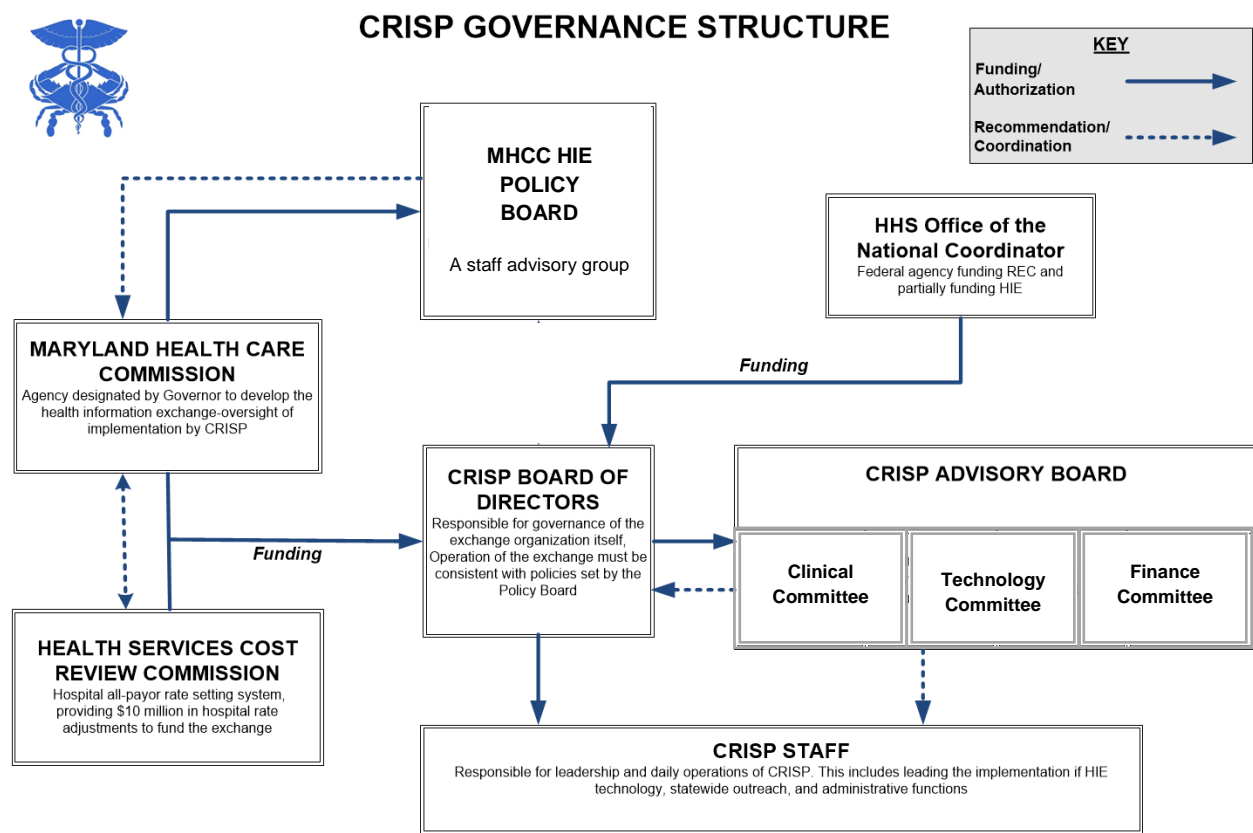
| Context   |   |
|---|---|
| Priorities  | Inputs  |
| <ul style="list-style-type: none"> <li>• ONC <ul style="list-style-type: none"> <li>• Laboratories are participating in delivering electronic structured laboratory results</li> <li>• Pharmacies are participating in electronic prescribing</li> <li>• Providers are sharing electronic patient care summaries</li> </ul> </li> <li>• State Identified <ul style="list-style-type: none"> <li>• Hospitals and other providers are given access to population health management reports for program development and care management</li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>• Feedback on laboratory reports available to health care users</li> <li>• Surescripts report of pharmacies supporting e-prescribing</li> <li>• CRISP monthly reports on implementation metrics, e.g., HIE usage, data feeds, etc.</li> <li>• HSCRC, hospital and care management feedback on hospital encounter reports from the HIE</li> </ul>   |
| Process and Outcomes  |   |
| Strategies  | Outcomes  |
| <ul style="list-style-type: none"> <li>• Work with hospitals to make laboratory and radiology reports available through the HIE</li> <li>• Work with hospitals to make discharge summary documents available through the HIE</li> <li>• Work with public health agencies, hospitals and other health care users to provide valuable re-admission reports quarterly</li> </ul>   | <ul style="list-style-type: none"> <li>• Increased clinical data contribution (e.g., increased number of data feeds to the HIE)</li> <li>• Increased adoption of HIE services (e.g., query, Direct, and ENS)</li> <li>• Continued and maintained use of HIE services (e.g., query, Direct, and ENS)</li> <li>• Hospitals and other health care users are provided with timely and accurate re-admission reports that help to inform care coordination efforts through ENS services</li> </ul> |

<sup>17</sup> This includes Maryland residence and residence from neighboring states.

<sup>18</sup> As detailed in PIN-001 issued by the ONC on July 6, 2010.

## 2. EVALUATION STAKEHOLDERS

Evaluation stakeholders are individuals or organizations that have a vested interest in the evaluation. Although often referred to as “stakeholders,” subgroups of these individuals may actually have very different types of interests in the evaluation performed. The primary stakeholders for this evaluation include the ONC, who commissioned the evaluation; MHCC, and CRISP’s Board of Directors and Advisory Boards, who are part of the CRISP HIE governance structure as detailed below.



The CRISP Board of Directors, comprised of 16 individuals, is the authoritative entity overseeing the operations of the statewide HIE and consists of founding members from Johns Hopkins Health System, University of Maryland Medical System, MedStar Health, and Erickson Living, including representatives from DHMH and others. The Board of Directors is responsible for overall management and governance, ensuring that the federal and State policies are implemented and considers recommendations from the Advisory Board. The Advisory Board is comprised of approximately 40 members on three committees: the Clinical Committee, the Technology Committee, and the Finance Committee.

The MHCC will work with CRISP staff to finalize the evaluation plan. The MHCC will include CRISP in discussions about what information will be most useful to them in taking actions to advance HIE and improve HIE in Maryland, reviewing proposed data collection and analysis methodologies, and developing an approach for the dissemination of findings and recommendations.

### **3. AIMS OF THE EVALUATION**

For purposes of this document, evaluation is defined as the collection of information about the context, processes, and outcomes of the program (as detailed above) to assess the program, improve program effectiveness and inform programmatic decisions within Maryland and by ONC. The primary aims of the evaluation, as required by ONC, are listed below.<sup>19</sup> The results of the evaluation will be used by stakeholders to inform future strategies and initiatives of the program using the evaluation findings.

- Describe the approaches and strategies used by the State-Designated HIE to facilitate and expand HIE in priority areas (e.g., what key activities of the State-Designated HIE or other stakeholders facilitated the availability of population health management reports for program development?)
- Identify and understand conditions influencing implementation of program strategies (e.g., how did the State-Designated HIE's engagement with hospitals support the strategy to make discharge summary documents available through the HIE?)
- Assess how HIE performance has progressed in key program priority areas (e.g., has the number of laboratory reports available through the HIE increased?)
- Assess how key approaches and strategies implemented by the State-Designated HIE contributed to progress, including lessons learned (e.g., how did the State-Designated HIE's governance structure contribute to the progress of ENS?)

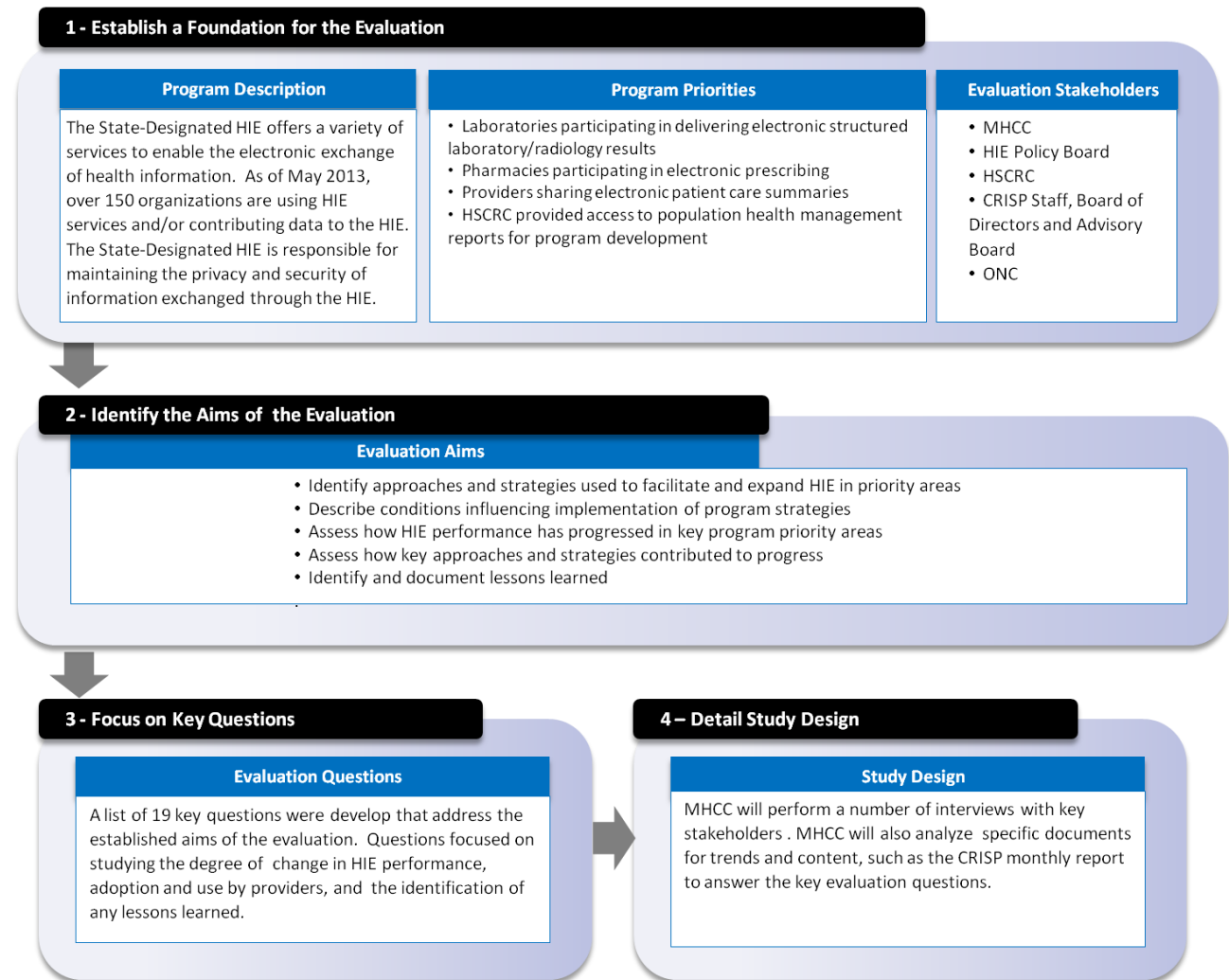
### **4. OVERALL APPROACH**

To establish a systematic approach for the evaluation plan, we provide a clear explanation of what the evaluation is intended to measure, how evaluation questions align to evaluation aims, and whether evaluation questions provide the information required by key stakeholders. The following figure illustrates these steps and presents an overview of our evaluation approach.

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<sup>19</sup> As detailed in PIN-002 issued by the ONC on February 8, 2012.





## 5. EVALUATION QUESTIONS

The evaluation questions aim to define what will be measured as part of the evaluation and were developed with consideration of the current reporting capabilities and data collection methods available to the statewide HIE. The table below identifies evaluation questions for each evaluation aim identified in Section 3. Additional information on data collection and analysis follows.

| Focus  | Evaluation Question   |
|--|---|
| <b>AIM 1: Identify approaches and strategies that were used to facilitate and expand HIE in priority areas</b> |   |
| Strategies   | <ul style="list-style-type: none"> <li>What approaches and strategies were used to facilitate and expand HIE in priority areas?</li> </ul>                      |
| <b>AIM 2: Describe conditions influencing implementation of program strategies</b>                             |   |
| Governance   | <ul style="list-style-type: none"> <li>What impact(s) did the governance model for HIE have on the program strategies?</li> </ul>                               |
| Engagement   | <ul style="list-style-type: none"> <li>Collectively, what impact(s) did communications and outreach to practices have on HIE stakeholder engagement?</li> </ul> |

| Focus   | Evaluation Question  |
|---|--|
| Resources   | <ul style="list-style-type: none"> <li>What impact(s) did the resources provided to support HIE implementation have on the program strategies?</li> </ul>  |
| <b>AIM 3: Assess how HIE performance has progressed in key program priority areas</b>                       |  |
| Laboratory Results  | <ul style="list-style-type: none"> <li>Is the number of lab reports from hospital being made available to the HIE increasing?</li> <li>Are the number lab reports from LabCorp and Quest being made available to the HIE increasing?</li> </ul>  |
| Patient Care Summaries  | <ul style="list-style-type: none"> <li>Have the number of discharge summary documents provided by hospitals to the HIE increased?</li> </ul>   |
| Hospital Re-admission Reports   | <ul style="list-style-type: none"> <li>Has CRISP provided re-admission reports to HSCRC and hospitals at least quarterly?</li> <li>Has CRISP worked with the above entities to refine the quarterly report to meet the needs of the entity?</li> </ul>   |
| Data Contribution   | <ul style="list-style-type: none"> <li>Has the number of data feeds (e.g., laboratory, radiology, clinical documents) being provided to the HIE by hospitals increased?</li> <li>Are hospitals enhancing the admission/discharge/transfer (ADT) feeds provided; e.g., additional information provided within the ADT feeds?</li> </ul>   |
| Adoption and Use  | <ul style="list-style-type: none"> <li>Is the adoption of the below HIE services increasing among health care providers? <ul style="list-style-type: none"> <li>ENS</li> <li>Query Portal</li> <li>Direct</li> <li>CRS</li> </ul> </li> <li>Are the number of queries of the HIE portal increasing?</li> </ul>   |
| Value, Usability, and Reliability   | <ul style="list-style-type: none"> <li>Is the number of documents found from provider queries increasing?</li> <li>Are HSCRC and hospitals being provided with both timely and accurate re-admission reports?</li> <li>Are managed care organizations being provided with both timely and accurate hospital encounter (i.e., admission and/or discharge) reports through ENS?</li> </ul> |
| <b>AIM 4: Assess how key approaches and strategies contributed to progress and identify lessons learned</b> |  |
| Elements of success   | <ul style="list-style-type: none"> <li>What impact(s) did program strategies have on program progress?</li> </ul>  |
| Lessons learned   | <ul style="list-style-type: none"> <li>What lessons, if any, did the program learn that are relevant to future efforts to advance HIE?</li> <li>How will those lessons be incorporated into the program strategies going forward?</li> </ul>   |

## 6. STUDY DESIGN

To address the established aims of the evaluation and related evaluation questions, multiple data collection and analysis methods will be used. The following table details the primary approach to data collection and analysis. Descriptions of methods for collection and analysis follow in section seven below.

| Evaluation Question  | Study Population(s)   | Data Source   | Data Collection        | Data Analysis   |
|--|---|---|------------------------|---|
| <ol style="list-style-type: none"> <li>1. Is the number of lab reports from hospitals being made available to the HIE increasing?</li> <li>2. Are the number lab reports from LabCorp and Quest being made available to the HIE increasing?</li> <li>3. Have the number of discharge summary documents provided by hospitals to the HIE increased?</li> <li>4. Has number of data feeds being provided to the HIE by hospitals increasing?</li> <li>5. Is the adoption of the below HIE services increasing among health care providers? <ol style="list-style-type: none"> <li>a. ENS</li> <li>b. Query Portal</li> <li>c. Direct</li> <li>d. CRS</li> </ol> </li> <li>6. Is there an increase in the number of queries of the HIE portal among those using the HIE portal?</li> <li>7. Is the number of found documents from provider queries increasing?</li> <li>8. Are hospitals enhancing the ADT feeds provided; e.g., additional information provided within the ADT feeds?</li> </ol> | <ul style="list-style-type: none"> <li>• CRISP</li> <li>• Hospitals</li> <li>• LabCorp</li> <li>• Quest</li> <li>• HIE Users</li> </ul> | <p>Monthly progress report submitted by CRISP to MHCC from March 2010 through December 2013</p> | <p>Document Review</p> | <ul style="list-style-type: none"> <li>• Data extraction</li> <li>• Trend analysis</li> </ul> |

| Evaluation Question   | Study Population(s)   | Data Source  | Data Collection          | Data Analysis    |
|---|---|--------------|--------------------------|------------------|
| 9. What approaches and strategies were used to facilitate and expand HIE in priority areas?<br>10. What impact(s) did the governance model for HIE have on the program strategies?<br>11. What impact(s) did communications and outreach to practices collectively have on key stakeholder engagement?<br>12. What impact(s) did program strategies have on program progress?<br>13. What lessons, if any, did the program learn that are relevant to future efforts to advance HIE?<br>14. How will those lessons be incorporated into the program strategies going forward?<br>15. What are stakeholder perceptions of the adequacy of resources to support HIE implementation? | Evaluation stakeholders, as described above   | Stakeholders | At least five interviews | Content analysis |
| 16. Has CRISP provided re-admission reports to HSCRC and hospitals at least quarterly?<br>17. Has CRISP worked with the entities above to refine quarterly reports to meet the needs of the entity?<br>18. Are hospitals and HSCRC being provided with both timely and accurate hospital encounter reports?<br>19. Are managed care organizations being provided with both timely and accurate hospital encounter reports through ENS?  | <ul style="list-style-type: none"> <li>• HSCRC</li> <li>• Hospitals</li> <li>• Care Coordination/ Management Organizations</li> </ul> | CRISP        | Interviews               | Content analysis |

To select methods, we considered overall appropriateness to the program context (e.g., priorities) and feasibility given program constraints (e.g., resources). Each data collection method is outlined in the table below. Other data collection methods may be utilized as appropriate.

### Data Collection Methods

| Collection Method | Description  |
|-------------------|--|
| Document Review   | The review of written documents and reports (e.g., progress reports) to collect data and information for analysis and interpretation. The MHCC will review the CRISP Monthly Progress Reports maintained by CRISP.   |
| Interviews        | The asking of questions orally to individuals, often in a format with standardized questions and open-ended responses. Closed-ended questions must have specific answers detailed. Representatives from the following groups will be interviewed: CRISP, Hospitals, Providers, and HIE Users |

### Data Analysis Methods

| Collection Method | Description  |
|-------------------|--|
| Data Extraction   | The process of reviewing a data source to retrieve data and information of interest. The CRISP Monthly Reports will be reviewed for data relevant to address the above evaluation questions where indicated.   |
| Content Analysis  | A method for studying the content of a data source (e.g., document, transcript, survey response) to categorize information, often leading to conclusions about common themes, issues, processes or ideas expressed. Results from interviews, focus groups, and the Privacy and Security Audit Report will be reviewed to address the above evaluation questions where indicated. |
| Trend Analysis    | A method for analyzing the change over time of measures that are collected repeatedly. Trend analysis compares repeated measurements to increase awareness of change. The CRISP Monthly Reports will be analyzed for trends to that will address the evaluation questions above where indicated.   |

## 7. DISSEMINATION OF FINDINGS AND RECOMMENDATIONS

The MHCC plans to analyze the above information as described and anticipates providing a summary and full evaluation report of the evaluation findings to evaluation stakeholders identified above, as requested.

## 8. TIMELINE

The timeline below details the activities and timelines around completion of the evaluation plan. The completion of evaluation activities depends on the progress of program activities, availability of data and timeliness of feedback from ONC on evaluation activities outlined within this plan.

| <b>Evaluation Activity</b>   | <b>Completion Date</b> |
|--|------------------------|
| MHCC staff will analyze monthly reports for content and trends   | 1/25/14                |
| MHCC staff will conduct interviews with CRISP and stakeholders   | 3/5/14                 |
| MHCC staff will submit the preliminary evaluation results to ONC   | 3/14/14                |
| MHCC staff will analyze the content of the interview results   | 4/15/13                |
| MHCC staff or a third party will draft results for aim 1: Identify approaches and strategies that were used to facilitate and expand HIE in priority areas | 4/25/14                |
| MHCC staff or a third party will draft results for aim 2: Describe conditions influencing implementation of program strategies                             | 5/16/14                |
| MHCC staff or a third party will draft results from aim 3: Assess how HIE performance has progressed in key program priority areas                         | 6/6/14                 |
| MHCC staff or a third party will draft results from aim 4: Assess how key approaches and strategies contributed to progress and identify lessons learned   | 7/2/14                 |
| MHCC staff or a third party will draft final evaluation results  | 7/25/14                |
| MHCC staff will submit the final evaluation results to ONC   | 8/15/14                |

## 9. EVALUATION REPORT OUTLINE

As required under PIN-002, MHCC plans to submit to ONC results of this evaluation and implications of the evaluation findings on program changes, summarized as a brief, (3-5) page document. The outline below details the items that will be included in the final evaluation report including those questions as detailed in section five above.<sup>20</sup>

- I. Introduction and background (1-2 paragraphs)
- II. Methods and limitations (1-2 paragraphs)
- III. Findings
  - a. Aims 1 & 2: Identify approaches and strategies that were used to facilitate and expand HIE in priority areas and describe conditions influencing implementation of program strategies (3-5 paragraphs)
    - i. Findings for Strategies, Governance, Engagement, and Resources questions
  - b. Aim 3: Assess how HIE performance has progressed in key program priority areas (5-6 paragraphs)
    - i. Findings for Laboratory Results questions
    - ii. Findings for Patient Care Summary questions
    - iii. Findings for hospital re-admission questions
    - iv. Findings for data contribution questions
    - v. Findings for adoption and use questions

<sup>20</sup> Maryland's cooperative agreement ends on March 14, 2013.

- vi. Findings for value, usability and reliability questions
- c. Aim 4: Assess how key approaches and strategies contributed to progress and identify lessons learned
  - i. Findings for elements of success and lessons learned questions (3-6 paragraphs)

#### IV. Closing and next steps (1 paragraph)

#### V. Appendices

- a. Evaluation Plan
- b. List of stakeholders participating in interviews
- c. List of CRISP Board members
- d. Maryland law related to HIE
- e. MHCC MOU with CRISP

## APPENDIX B - ONC APPROVAL OF HIE EVALUATION PLAN



December 17, 2013

P. David Sharp, Ph.D, HIT Coordinator, State of Maryland  
Maryland Department of Health and Mental Hygiene, Maryland Health Care Commission  
Herbert R. O'Connor State Office Building  
201 West Preston Street  
Baltimore, MD 21201-2399

Dear Dr. Sharp,

Thank you for your re-submission of the annual update of the State HIE Strategic and Operational Plan (SOP) to the Office of the National Coordinator for Health Information Technology (ONC).

In reviewing your re-submission, which now includes an evaluation plan, we have found that the Maryland Department of Health and Mental Hygiene (DHMH) has provided the requested documentation to meet with the requirements outlined in Program Information Notice #ONC-HIE-PIN-002 and #ONC-HIE-PIN-003. Accordingly, the updates are approved.

Please keep this notice with your records to document that you are in compliance with the programmatic implementation requirement to submit an annual SOP annual update. Please feel free to reach out to me if you have any questions or need additional clarification.

Sincerely,

A handwritten signature in blue ink that reads "Rachel".

Rachel Abbey, MPH  
Project Officer  
rachel.abbey@hhs.gov

**State Health Information Exchange Program**  
Office of the National Coordinator for Health Information Technology  
U.S. Department of Health and Human Services  
<http://www.healthit.gov>

cc: Ms. Angela Evatt, Chief; Health Information Exchange Program  
Ms. Sarah Orth, Chief; Health Information Technology Program



## APPENDIX C – CRISP LETTER OF SUPPORT



**CRISP**

*Connecting Physicians With Technology  
to Improve Patient Care in Maryland*

April 2, 2014

David Sharp

Center for Health Information Technology & Innovative Care Delivery

Maryland Health Care Commission

4160 Patterson Ave

Baltimore, MD 21215

Dear Mr. Sharp:

The Office of the National Coordinator for Healthcare Information Technology (ONC) Health Information Exchange (HIE) Grant Program has asked the Maryland Health Care Commission (MHCC) to create a Program Evaluation Report. Chesapeake Regional Information System for Our Patients (CRISP) has been an active participant with the creation and review of the report in partnership with the MHCC. CRISP provides its support to the Program Evaluation Report.

We look forward to our continued partnership with the MHCC.

Sincerely,

David Horrocks

President

Chesapeake Regional Information System for Our Patients (CRISP)

Chesapeake Regional Information System for our Patients

## APPENDIX D - MD. CODE ANN., HEALTH-GEN. § 19-143

*Md. HEALTH-GENERAL Code Ann. § 19-143*

Annotated Code of Maryland

\*\*\* Current through all Chapters Effective October 1, 2012, of the 2012 General Assembly Regular Session, First Special Session, and Second Special Session. \*\*\*

HEALTH - GENERAL

TITLE 19. HEALTH CARE FACILITIES

SUBTITLE 1. HEALTH CARE PLANNING AND SYSTEMS REGULATION

PART IV. ELECTRONIC HEALTH RECORDS -- REGULATION AND REIMBURSEMENT

Md. HEALTH-GENERAL Code Ann. § 19-143 (2012)

§ 19-143. Electronic health records

(a) Designation of health information exchange. -- On or before October 1, 2009, the Commission and the Health Services Cost Review Commission shall designate a health information exchange for the State.

(b) Progress report. -- On or before January 1, 2010, the Commission shall:

(1) Report, in accordance with § 2-1246 of the State Government Article, to the Senate Finance Committee and the House Health and Government Operations Committee on progress in implementing the requirements of subsections (a) and (d) of this section; and

(2) Include in the report recommendations for legislation specifying how incentives required for State-regulated payors that are national carriers shall take into account existing carrier activities that promote the adoption and meaningful use of electronic health records.

(c) Subsequent report for review and comment. --

(1) On or before January 1, 2011, following consultations with appropriate stakeholders, the Commission shall post on its website for public comment and submit to the Governor and, in accordance with § 2-1246 of the State Government Article, the Senate Finance Committee and the House Health and Government Operations Committee a report on:

(i) The development of a coordinated public-private approach to improve the State's health information infrastructure;

(ii) Any changes in State laws that are necessary to protect the privacy and security of health information stored in electronic health records or exchanged through a health information exchange in the State;

(iii) Any changes in State laws that are necessary to provide for the effective operation of a health information exchange;

(iv) Any actions that are necessary to align funding opportunities under the federal American Recovery and Reinvestment Act of 2009 with other State and private sector initiatives related to health information technology, including:

1. The patient-centered medical home;
2. The electronic health record demonstration project supported by the federal Centers for Medicare and Medicaid Services;
3. The health information exchange; and
4. The Medicaid Information Technology Architecture Initiative; and

(v) Recommended language for the regulations required under subsection (d) of this section.

(2) The Senate Finance Committee and the House Health and Government Operations Committee shall have 60 days from receipt of the report for review and comment.

(d) Regulations; legislative intent. –

(1) On or before September 1, 2011, the Commission, in consultation with the Department, payors, and health care providers, shall adopt regulations that require State-regulated payors to provide incentives to health care providers to promote the adoption and meaningful use of electronic health records.

(2) Incentives required under the regulations:

- (i) Shall have monetary value;
- (ii) Shall facilitate the use of electronic health records by health care providers in the State;
- (iii) To the extent feasible, shall recognize and be consistent with existing payor incentives that promote the adoption and meaningful use of electronic health records;

(iv) Shall take into account:

1. Incentives provided to health care providers under Medicare and Medicaid; and
2. Any grants or loans that are available to health care providers from the federal government;

(v) May include:

1. Increased reimbursement for specific services;
2. Lump sum payments;
3. Gain-sharing arrangements;
4. Rewards for quality and efficiency;
5. In-kind payments; and
6. Other items or services to which a specific monetary value can be assigned; and

(vi) Shall be paid in cash, unless the State-regulated payor and the health care provider agree on an incentive of equivalent value.

(3) The regulations need not require incentives for the adoption and meaningful use of electronic health records, for each type of health care provider listed in § 19-142(e) of this subtitle.

(4) If federal law is amended to allow the State to regulate payments made by entities that self-insure their health benefit plans, regulations adopted under this section shall apply to those entities to the same extent to which they apply to State-regulated payors.

(5) Regulations adopted under this subsection:

(i) May not require a group model health maintenance organization, as defined in § 19-713.6 of this title, to provide an incentive to a health care provider who is employed by the multispecialty group of physicians under contract with the group model health maintenance organization; and

(ii) Shall allow a State-regulated payor to:

1. Request information from a health care provider to validate the health care provider's incentive claim; and

2. If the State-regulated payor determines that a duplicate incentive payment or an overpayment has been made, reduce the incentive amount.

(6) The Commission may:

(i) Audit the State-regulated payor or the health care provider for compliance with the regulations adopted under this subsection; and

(ii) If it finds noncompliance, request corrective action.

(7) It is the intent of the General Assembly that the State Employee and Retiree Health and Welfare Benefits Program support the incentives provided under this subsection through contracts between the Program and the third party administrators arranging for the delivery of health care services to members covered under the Program.

(e) Actions to ensure compliance with federal law. -- The Health Services Cost Review Commission, in consultation with hospitals, payors, and the federal Centers for Medicare and Medicaid Services, shall take the actions necessary to:

(1) Assure that hospitals in the State receive the payments provided under § 4102 of the federal American Recovery and Reinvestment Act of 2009 and any subsequent federal rules and regulations; and

(2) Implement any changes in hospital rates required by the federal Centers for Medicare and Medicaid Services to ensure compliance with § 4102 of the federal American Recovery and Reinvestment Act of 2009 and any subsequent federal rules and regulations.

(f) Mechanism for receipt of payments for participants in State medical assistance program. -- The Department, in consultation with the Commission, shall develop a mechanism to assure that health care providers that participate in the Maryland Medical Assistance Program receive the payments provided for adoption and use of electronic health records technology under § 4201 of the federal American Recovery and Reinvestment Act of 2009 and any subsequent federal rules and regulations.

(g) Report to Governor and General Assembly. -- On or before October 1, 2012, the Commission shall report to the Governor and, in accordance with § 2-1246 of the State Government Article, the General Assembly on progress achieved toward adoption and meaningful use of electronic health records by health care providers in the State and recommendations for any changes in State laws that may be necessary to achieve optimal adoption and use.

(h) Designation of management service organization. –

(1) On or before October 1, 2012, the Commission shall designate one or more management service organizations to offer services throughout the State.

(2) The Commission may use federal grants and loans to help subsidize the use of the designated management service organizations by health care providers.

(i) Requirements of electronic health records. -- On and after the later of January 1, 2015, or the date established for the imposition of penalties under § 4102 of the federal American Recovery and Reinvestment Act of 2009:

(1) Each health care provider using an electronic health record that seeks payment from a State-regulated payor shall use electronic health records that are:

(i) Certified by a national certification organization designated by the Commission; and

(ii) Capable of connecting to and exchanging data with the health information exchange designated by the Commission under subsection (a) of this section; and

(2) The incentives required under subsection (d) of this section may include reductions in payments to a health care provider that does not use electronic health records that meet the requirements of paragraph (1) of this subsection.

**HISTORY:** 2009, ch. 689; 2011, chs. 380, 532, 533.

## APPENDIX E – LIST OF CRISP BOARD OF DIRECTORS MEMBERS

|  |  |
|--|--|
| Patty Brown (Chair)<br>Johns Hopkins Healthcare  | Ernest Carter, M.D., PhD<br>Prince George's County Health Department |
| Mark Kelemen, M.D. (Vice Chair)<br>University of Maryland Medical System               | Willarda Edwards, M.D.<br>Drs. Edwards & Stephens, Internal Medicine |
| Catherine Szenczy (Secretary)<br>MedStar Health System                                 | Sheila Mackertich<br>Healthcare Access Maryland                      |
| Joel McAlduff, M.D.<br>MedStar Health System   | DeWayne Oberlander<br>Columbia Medical Practice                      |
| Jon Burns<br>University of Maryland Medical System                                     | Vincent Ancona<br>Amerigroup Maryland                                |
| Adam Kane (Executive Committee)<br>Erickson Living                                     | <u>Ex-Officio</u>  |
| John Erickson<br>Erickson Living   | David Horrocks (President)<br>CRISP                                  |
| Matt Narrett, M.D.<br>Erickson Living  | Daniel Wilt (Vice President)<br>CRISP                                |
| Stephanie Reel<br>Johns Hopkins University   | Michael Cardamone (Treasurer)<br>Johns Hopkins Health System         |
| Laura Herrera, M.D.<br>Maryland Department of Health and Mental Hygiene                | Traci La Valle (Director)<br>Maryland Hospital Association           |
| Tricia Roddy (Executive Committee)<br>Maryland Department of Health and Mental Hygiene | Tressa Springman (Director)<br>LifeBridge Health                     |

## APPENDIX F – CRISP MONTHLY REPORT – DECEMBER 2013

# CRISP Monthly Reports

December 2013

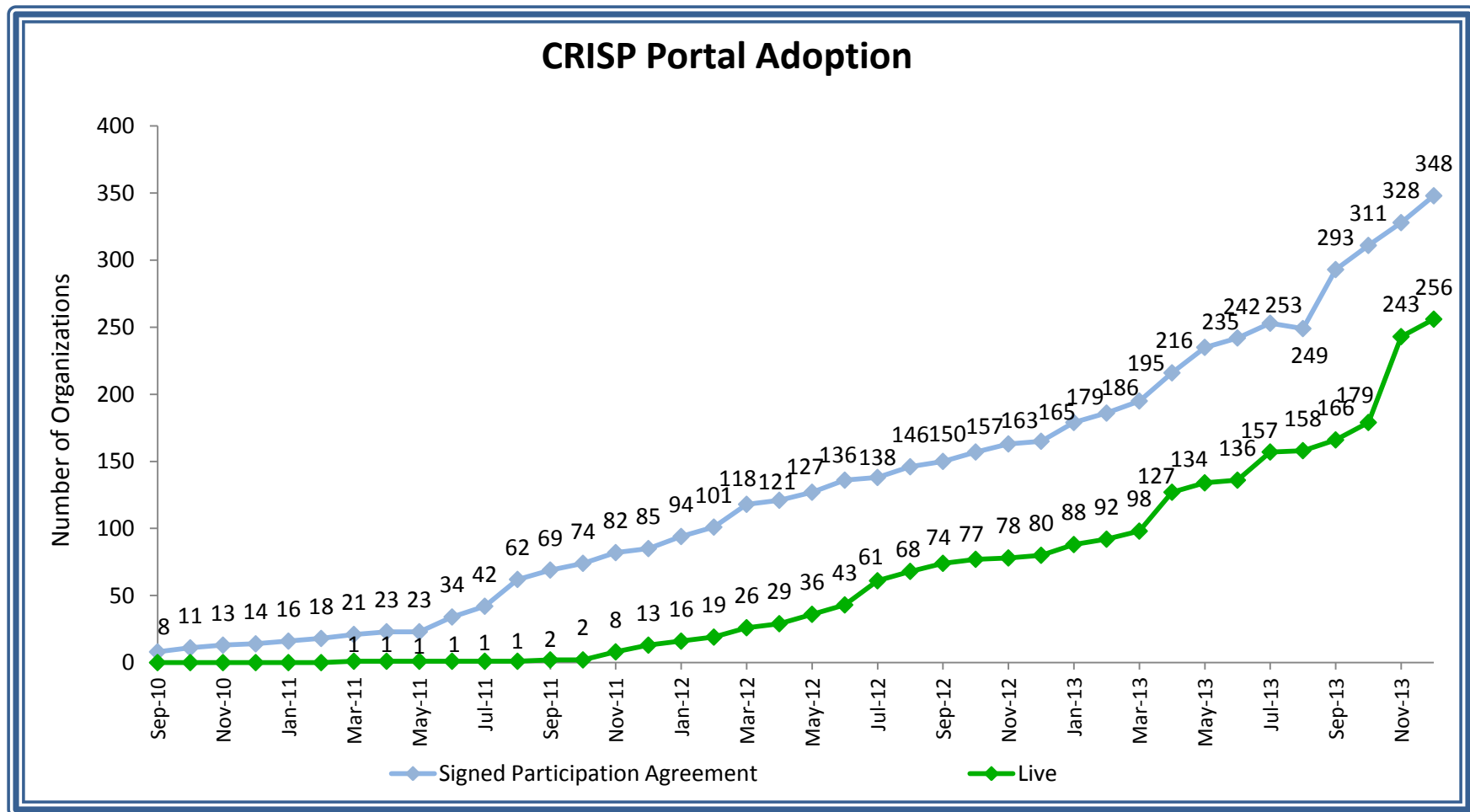
The Chesapeake Regional Information System for our Patients (CRISP), the State-Designated health information exchange (HIE), submits monthly status reports to the Maryland Health Care Commission (MHCC). The monthly reports provide updates to the HIE program and use of HIE services, the Challenge Grant program, and the Regional Extension Center (REC) program. The MHCC's Center for Health Information Technology & Innovative Care Delivery uses the information to facilitate development of the State-Designated HIE, craft policy around privacy and security, and develop initiatives to expand health information technology adoption, including electronic health record adoption and meaningful use.

| <b>At a Glance</b>   |                |                 |                 |             |                  |
|--|----------------|-----------------|-----------------|-------------|------------------|
| HIE Category   | New<br>October | New<br>November | New<br>December | Total*<br># | Total*<br>%      |
| <b>Ambulatory Practice Data Consumption</b><br>(# of organizations)<br>N=6,537 |                |                 |                 |             |                  |
| Signed participation agreements - CRISP Portal                                 | 18             | 6               | 7               | 201         | 3%               |
| CRISP Portal live  | 13             | 4               | 7               | 160         | 2.4%             |
| Direct message accounts live   | 4              | 14              | 15              | 96          | 1.5%             |
| Encounter notification service live  | 2              | 4               | 7               | 45          | 0.7%             |
| <b>Hospital Data Submission</b><br>(# of hospitals)<br>N=46                    |                |                 |                 |             |                  |
| Laboratory reports   | 0              | 0               | 0               | 31          | 67%              |
| Radiology reports  | 0              | 0               | 0               | 35          | 76%              |
| Transcribed reports  | 0              | 0               | 1               | 33          | 73% <sup>1</sup> |
| <b>Long Term Care Data Consumption</b><br>(# of organizations)<br>N=235        |                |                 |                 |             |                  |
| Signed participation agreements - CRISP Portal                                 | 1              | 0               | 0               | 38          | 16%              |
| CRISP portal live  | 0              | 0               | 1               | 19          | 8%               |
| Encounter notification service live  | 0              | 0               | 1               | 6           | 3%               |
| <b>Query Portal Usage</b>  |                |                 |                 |             |                  |
| Number of CRISP Portal queries   | 14,555         | 15,339          | 16,231          |             |                  |
| Single-sign on live in Maryland hospitals                                      | 0              | 0               | 0               | 5           | 11%              |

\*Totals are cumulative

Notes:

- Garrett County Memorial Hospitals has no plans to submit transcribed reports to CRISP
- Number of CRISP Portal queries are not listed in the Total # and Total % columns because CRISP Portal queries are not calculated based on a cumulative total over time

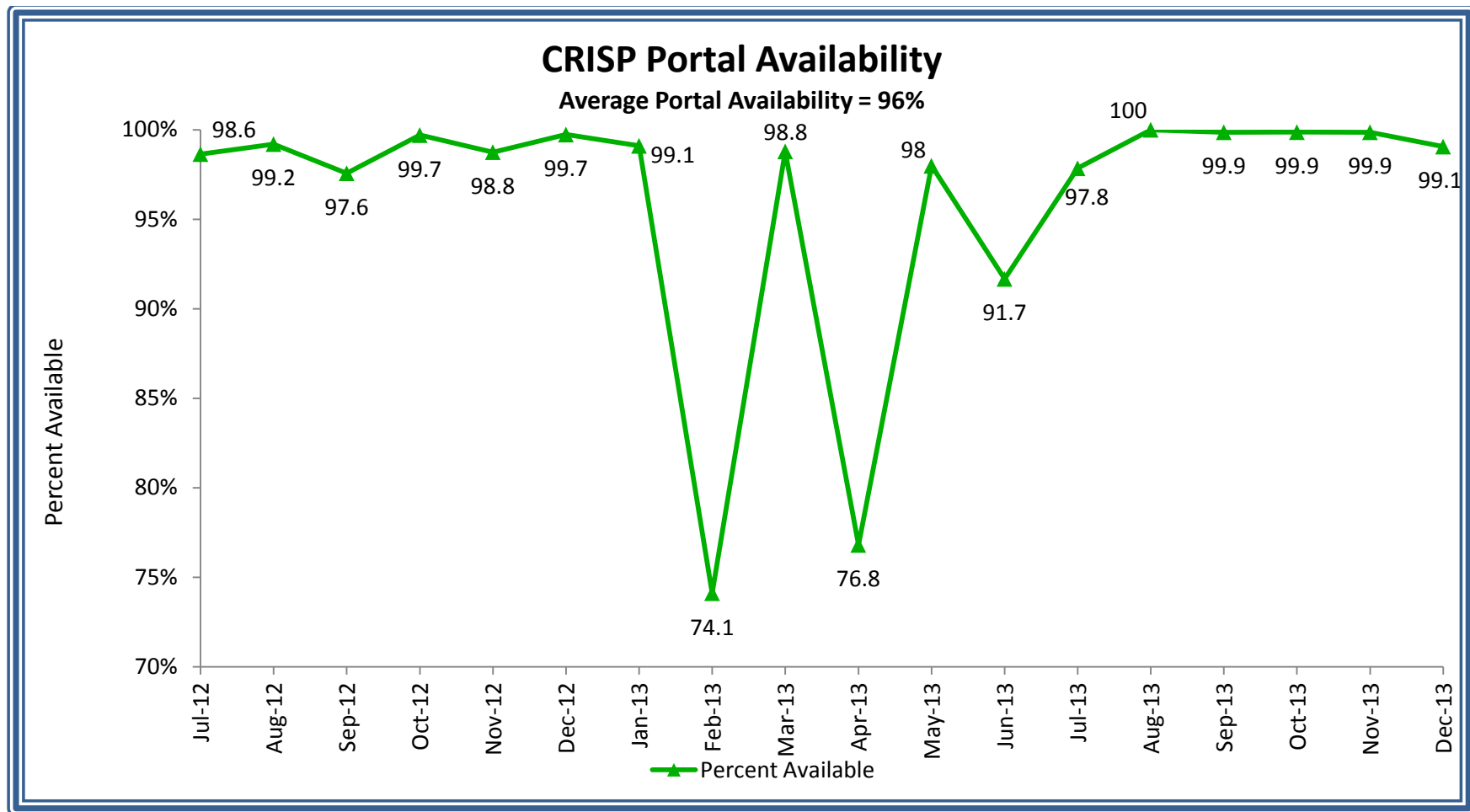
**Key Terms:**

**CRISP Portal:** A standalone web-based system that contains patient health information from Maryland hospitals and other providers connected to the HIE. Information available via the portal includes patient demographics, laboratory results, radiology reports, discharge summaries, operative and consult notes, and medication fill history

**Participation Agreement:** Providers sign a participation agreement with CRISP in order to query the CRISP Portal

**Live:** An organization has completed the credentialing, legal, and training process and has at least one user approved to use the Portal

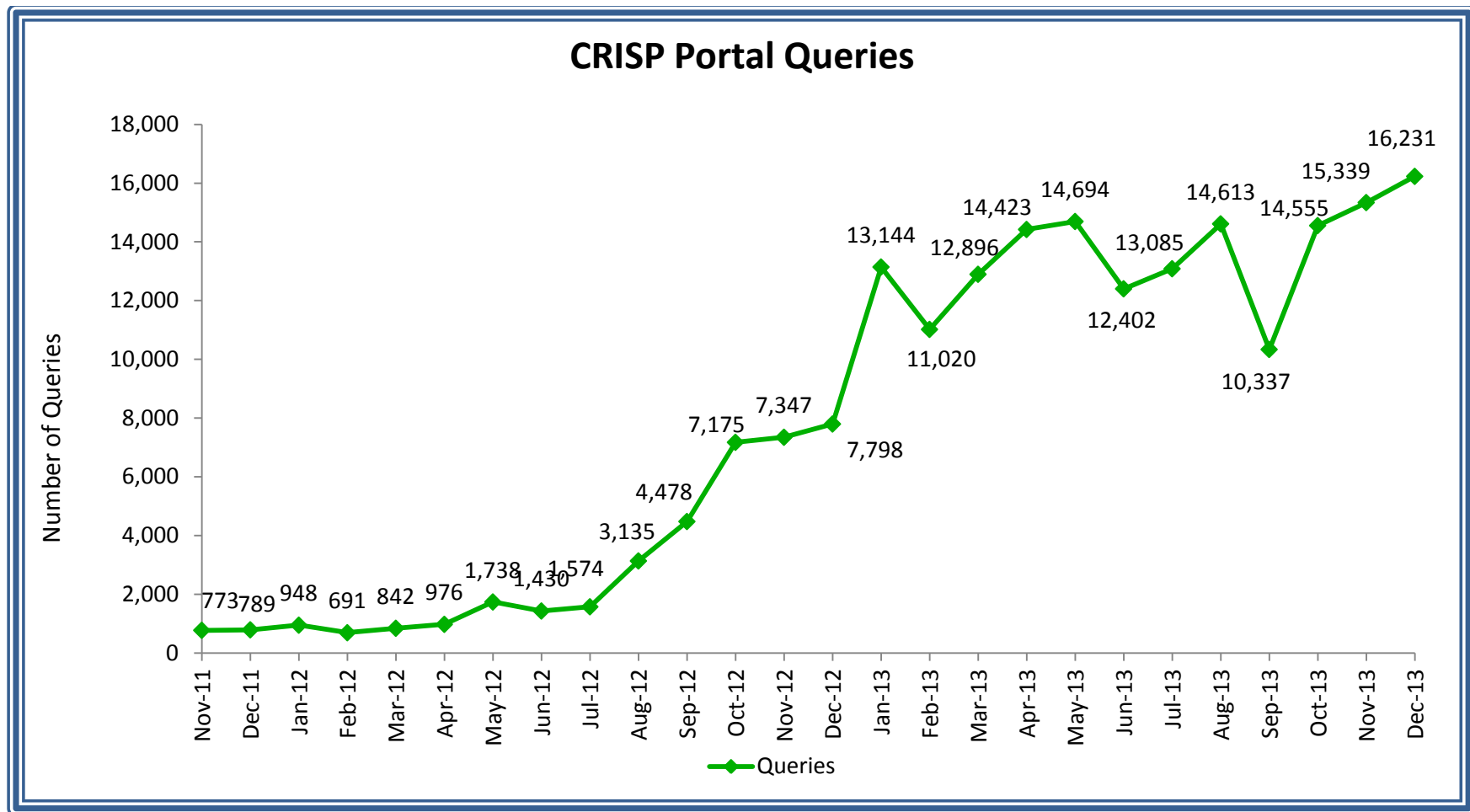


**Key Terms:**

**CRISP Portal:** A standalone web-based system that contains patient health information from Maryland hospitals and other providers connected to the HIE. Information available via the portal includes patient demographics, laboratory results, radiology reports, discharge summaries, operative and consult notes, and medication fill history

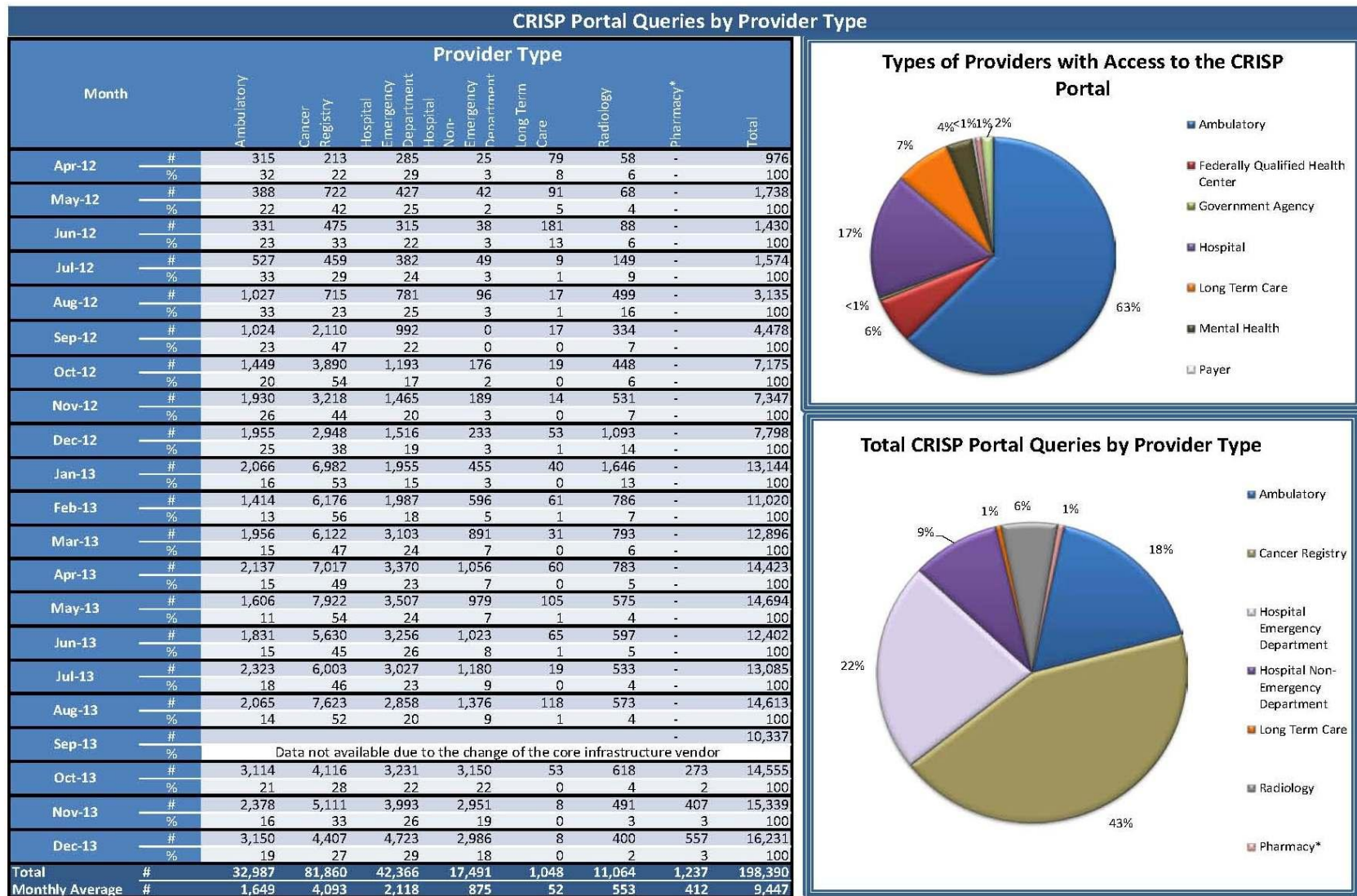
**Portal Availability:** The percent of hours that the portal is live out of all possible hours in a month

**Percent Available:** The percent of hours that the portal is available during the month

**Key Terms:**

**CRISP Portal:** The CRISP Portal is a standalone system available via the Internet that provides patient health information from Maryland hospitals and other providers who are connected to the HIE. Currently, select information is available via the portal, including patient demographics, laboratory results, radiology reports, discharge summaries, operative and consult notes, and medication fill history

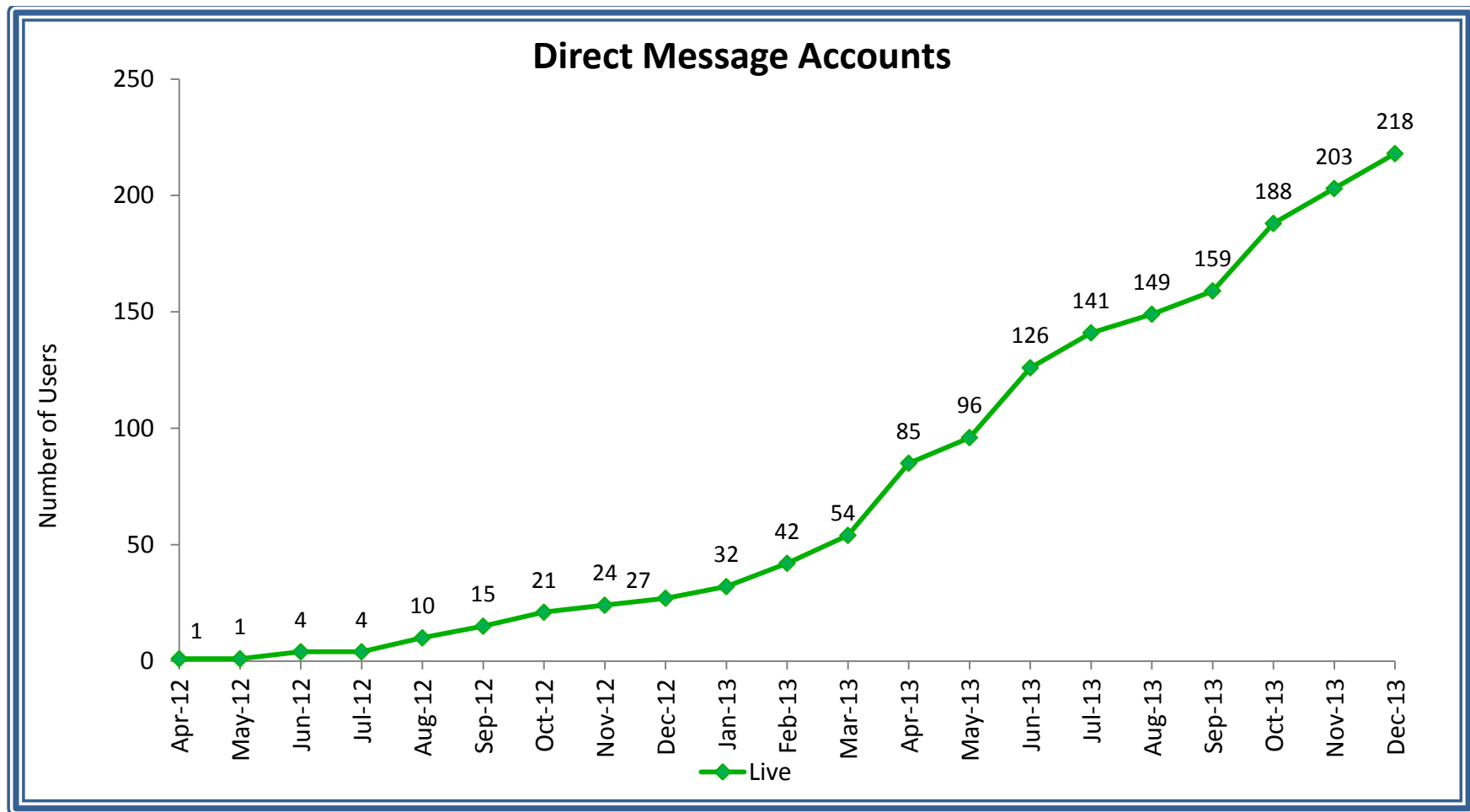
**Queries:** Number of searches within the CRISP Portal per month

**Key Terms:**

**CRISP Portal:** The CRISP Portal is a standalone system available via the Internet that provides patient health information from Maryland hospitals and other providers who are connected to the HIE. Currently, select information is available via the portal, including patient demographics, laboratory results, radiology reports, discharge summaries, operative and consult notes, and medication fill history

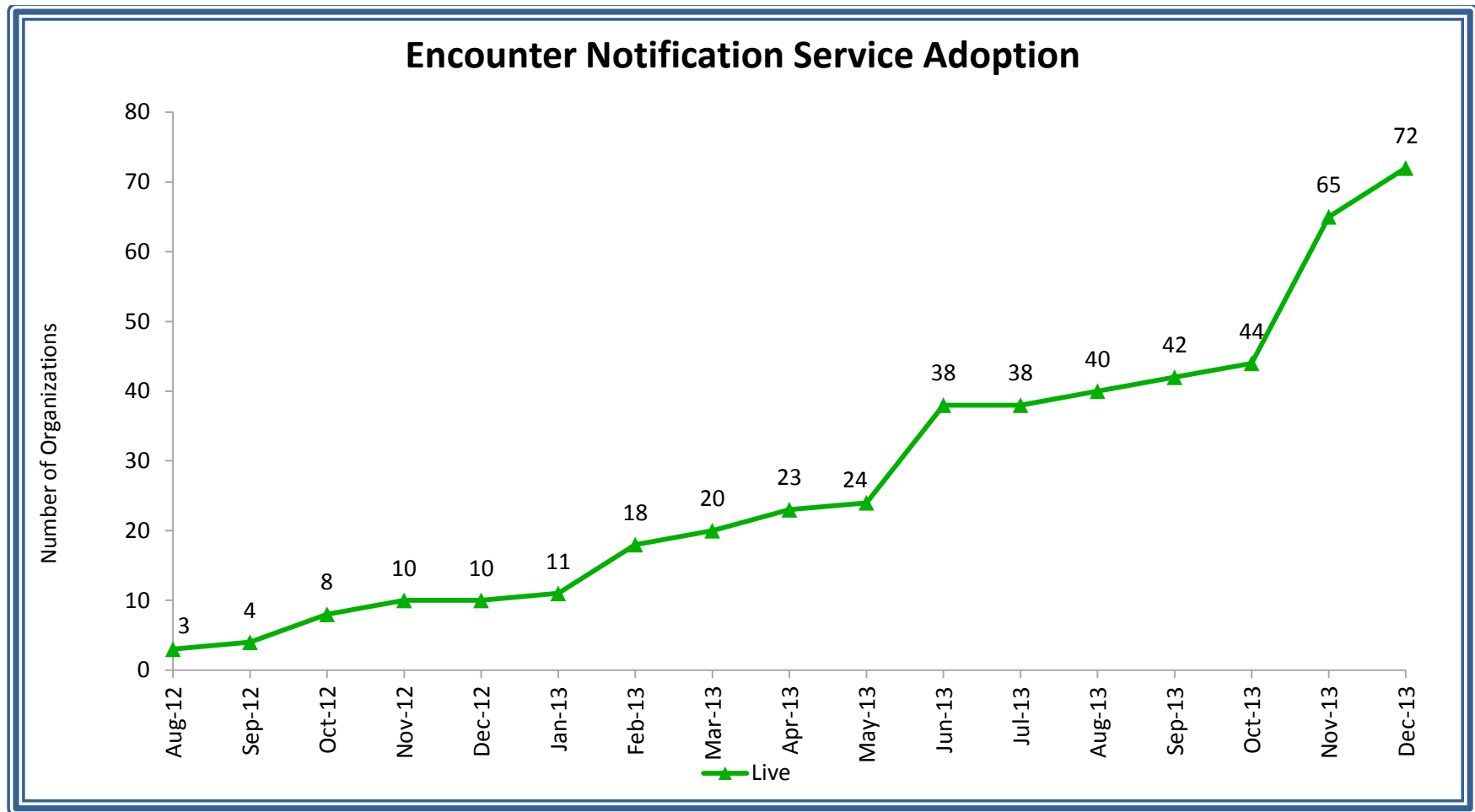
**Queries:** Number of searches within the CRISP Portal per month

**\*Note:** Pharmacy data available beginning in October 2013

**Key Terms:**

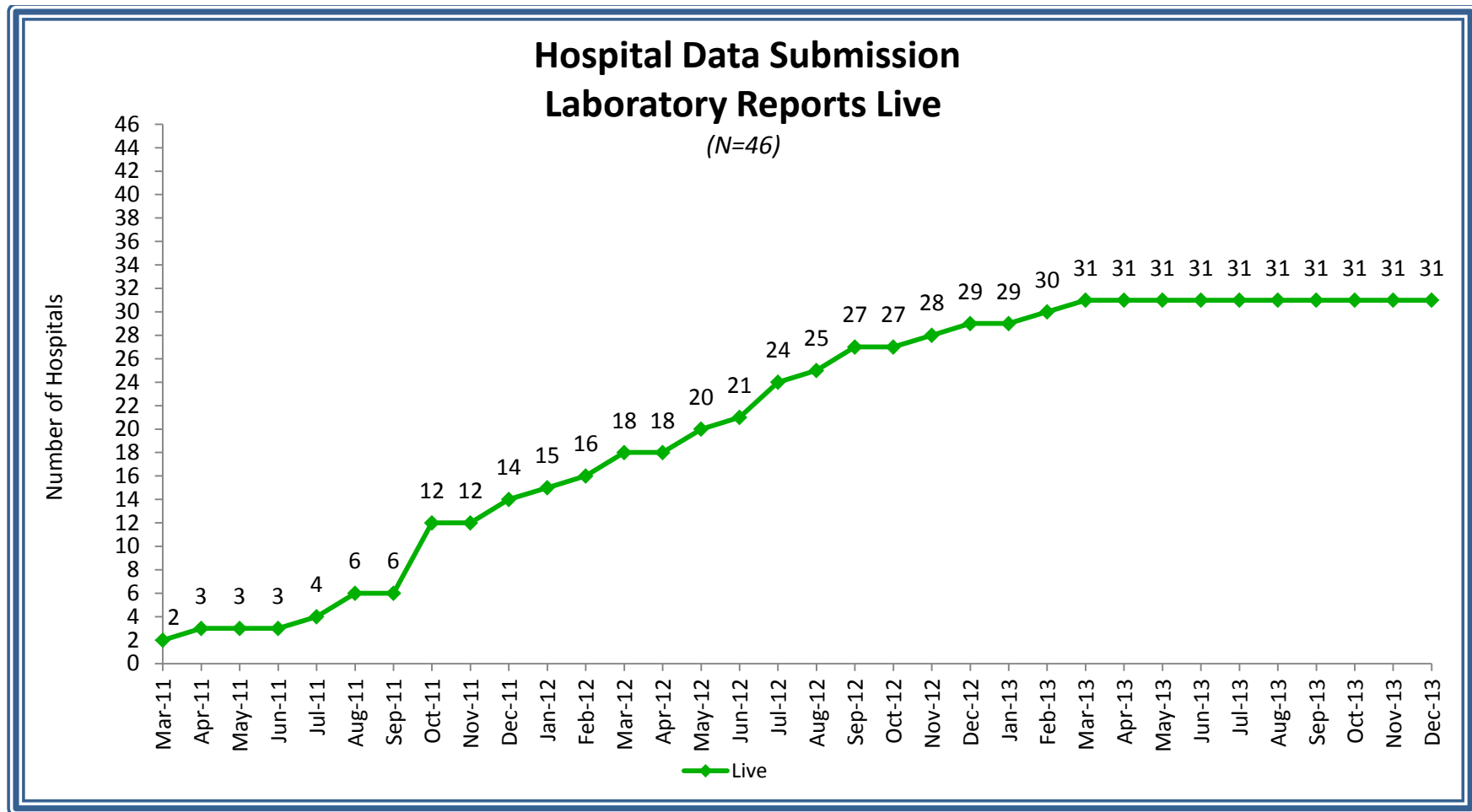
**Direct Message Accounts:** A secure and encrypted e-mail service that supports electronic communication between health care providers

**Live:** Users live with a CRISP Direct Messaging account

**Key Terms:**

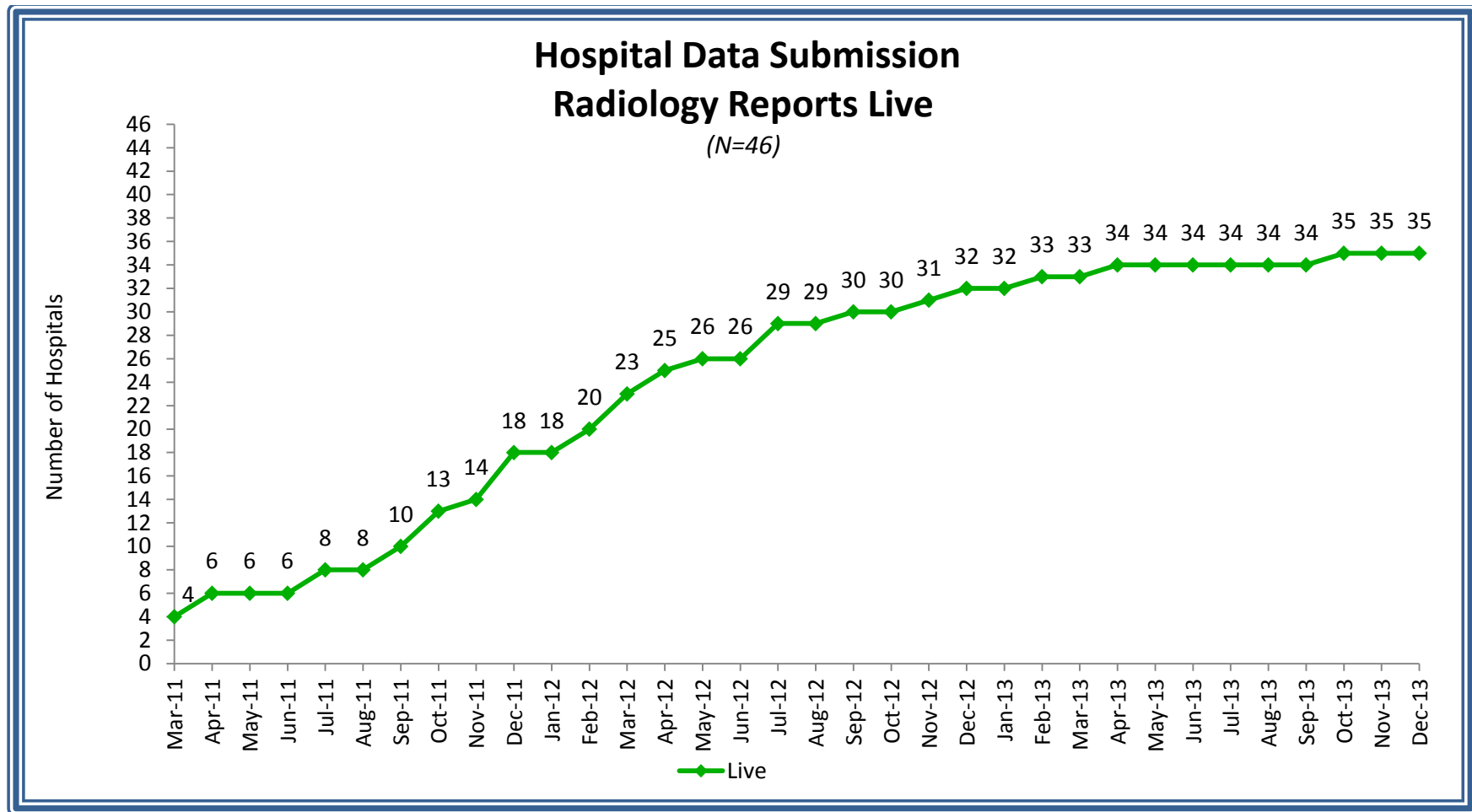
**Encounter Notification System (ENS):** A system that notifies providers when one of their patients has an encounter at a Maryland hospital, which includes patient admission, discharge, and transfer activity

**Live:** The number of organizations receiving ENS alerts

**Key Terms:**

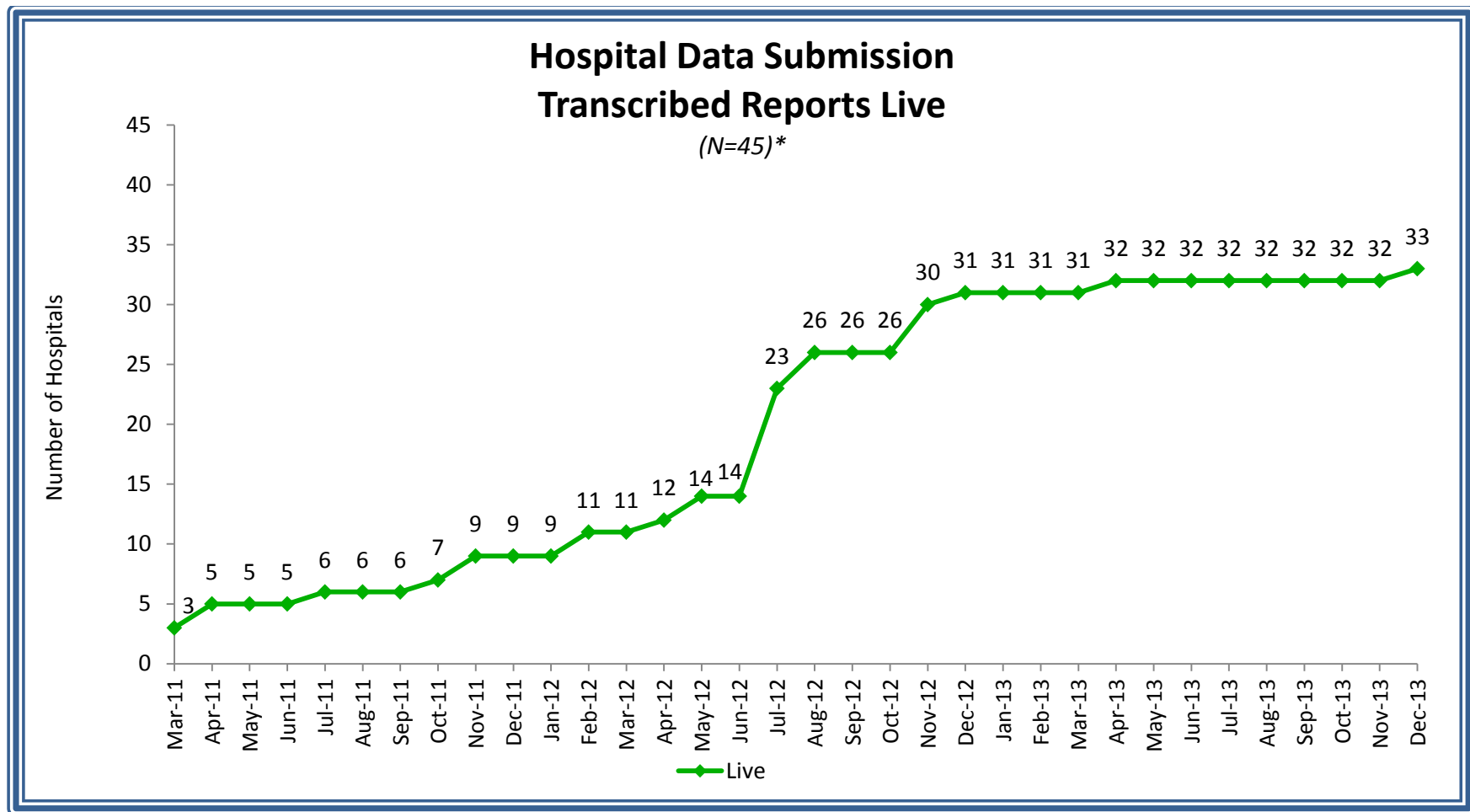
**Live:** The number of hospitals using the laboratory documents exchange service

**N:** The number of acute care hospitals in Maryland

**Key Terms:**

**Live:** The number of hospitals using the radiology documents exchange service

**N:** The number of acute care hospitals in Maryland

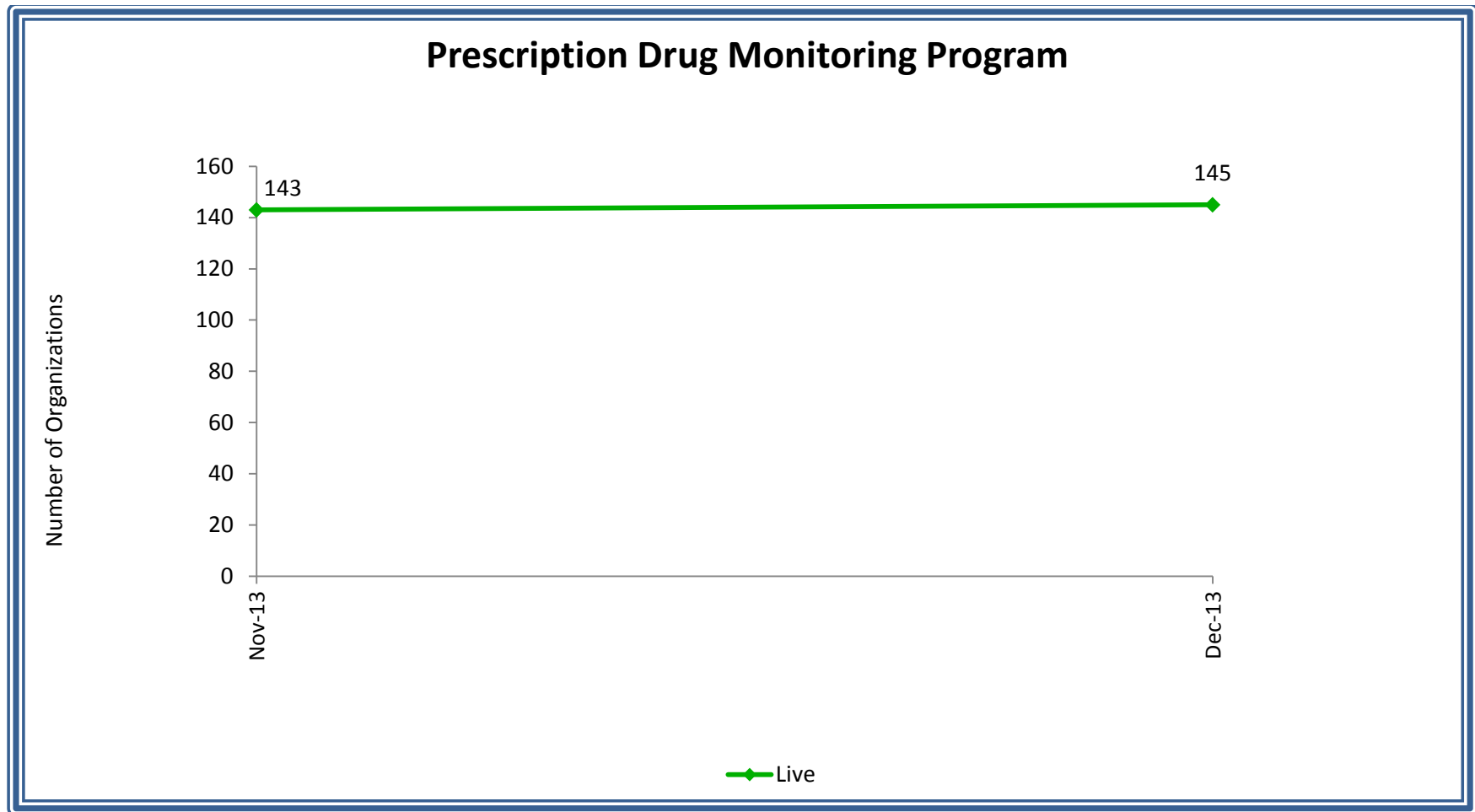
**Key Terms:**

**Live:** The number of hospitals using the transcribed exchange service

**N:** The number of acute care hospitals in Maryland

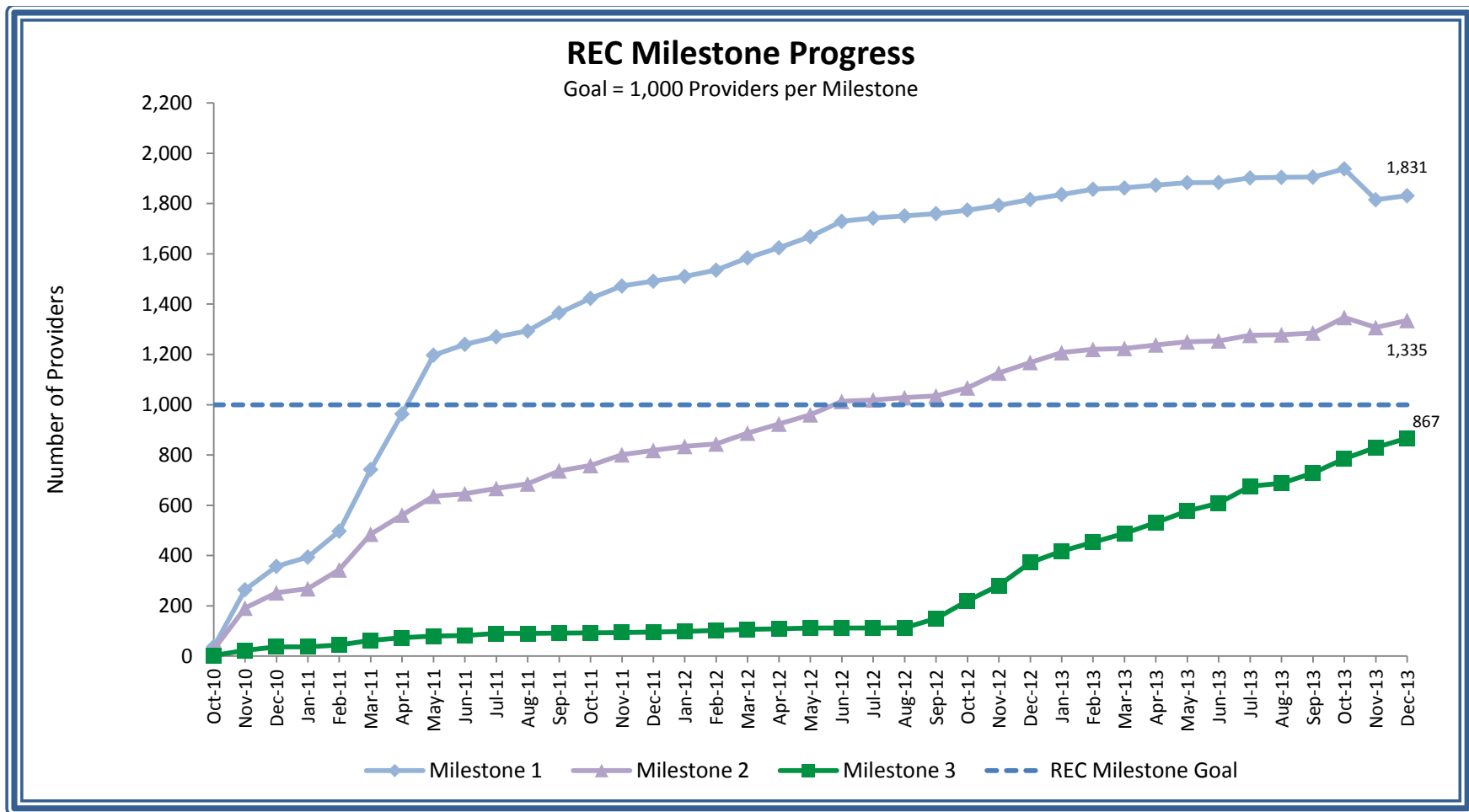
\*Garrett County Memorial Hospital has no plans to submit transcribed reports to CRISP



**Key Terms:**

**Live:** The number of organizations using the PDMP services

**Prescription Drug Monitoring Program:** Records of prescribing and dispensing of controlled dangerous substances available in CRISP query portal that went live as a pilot in November 2013 CRISP

**Key Terms:**

**REC:** The Regional Extension Center (REC) provides technical assistance to priority care providers in adopting and using an electronic health record (EHR)

**Milestone 1:** A priority primary care provider that has signed a participation agreement with a management service organization

**Milestone 2:** A priority primary care provider that has adopted an EHR and is using certain functionalities of the system

**Milestone 3:** A priority primary care provider that has achieved meaningful use defined by the Centers for Medicare & Medicaid Services

**REC Milestone Goal:** The milestone goal was established by the Office of the National Coordinator for Health Information Technology

| REC Progress |   |    |  |    |       |     |
|--------------|---|----|--|----|-------|-----|
| Milestone    | Provider had an EHR when signed up with the program |    | Provider did not have an EHR at sign up with the program |    | Total |     |
|              | #   | %  | #  | %  | #     | %   |
| Milestone 1  | 745   | 41 | 1,086  | 59 | 1,831 | 183 |
| Milestone 2  | 699   | 52 | 636  | 48 | 1,335 | 134 |
| Milestone 3  | 431   | 50 | 436  | 50 | 867   | 87  |

**Key Terms:**

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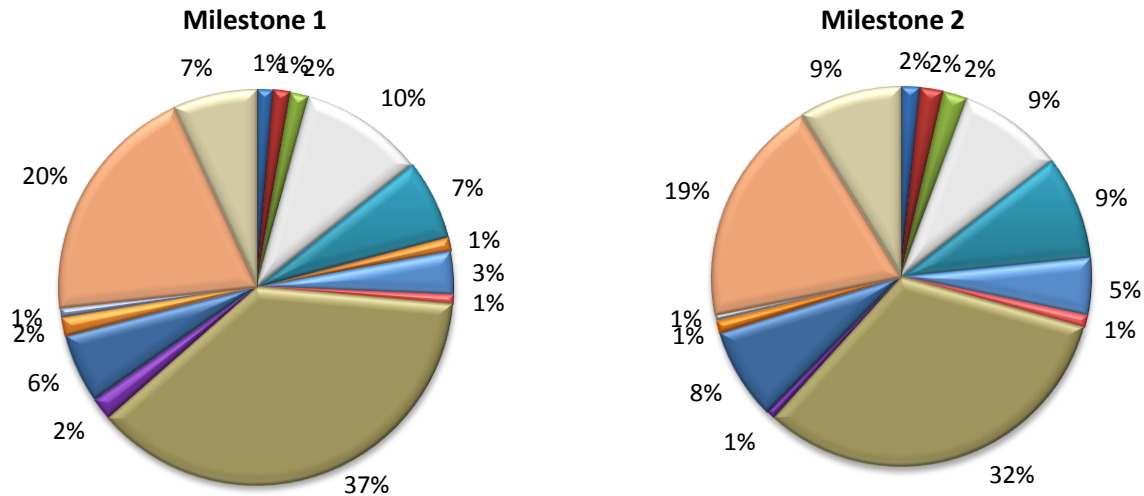
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**REC Milestone Goal:** The milestone goal was established by the Office of the National Coordinator for Health Information Technology

### Maryland REC Progress – Percent PCPs Participating by MSO by Milestone



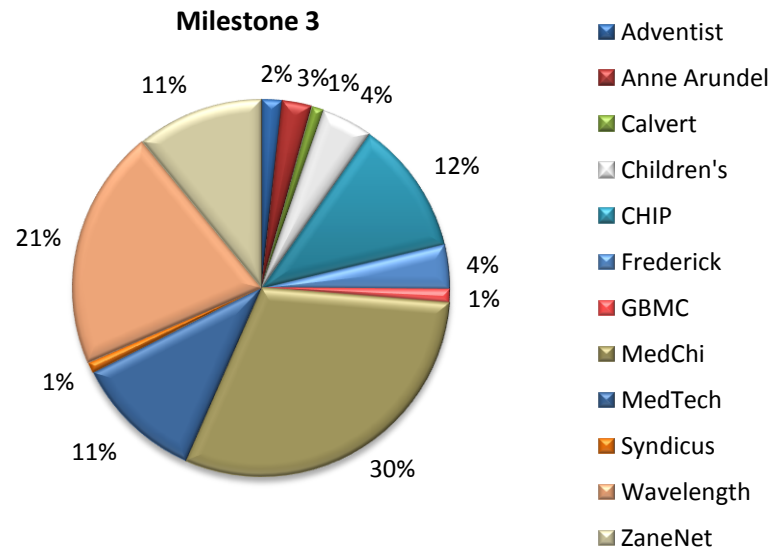
#### Key Terms:

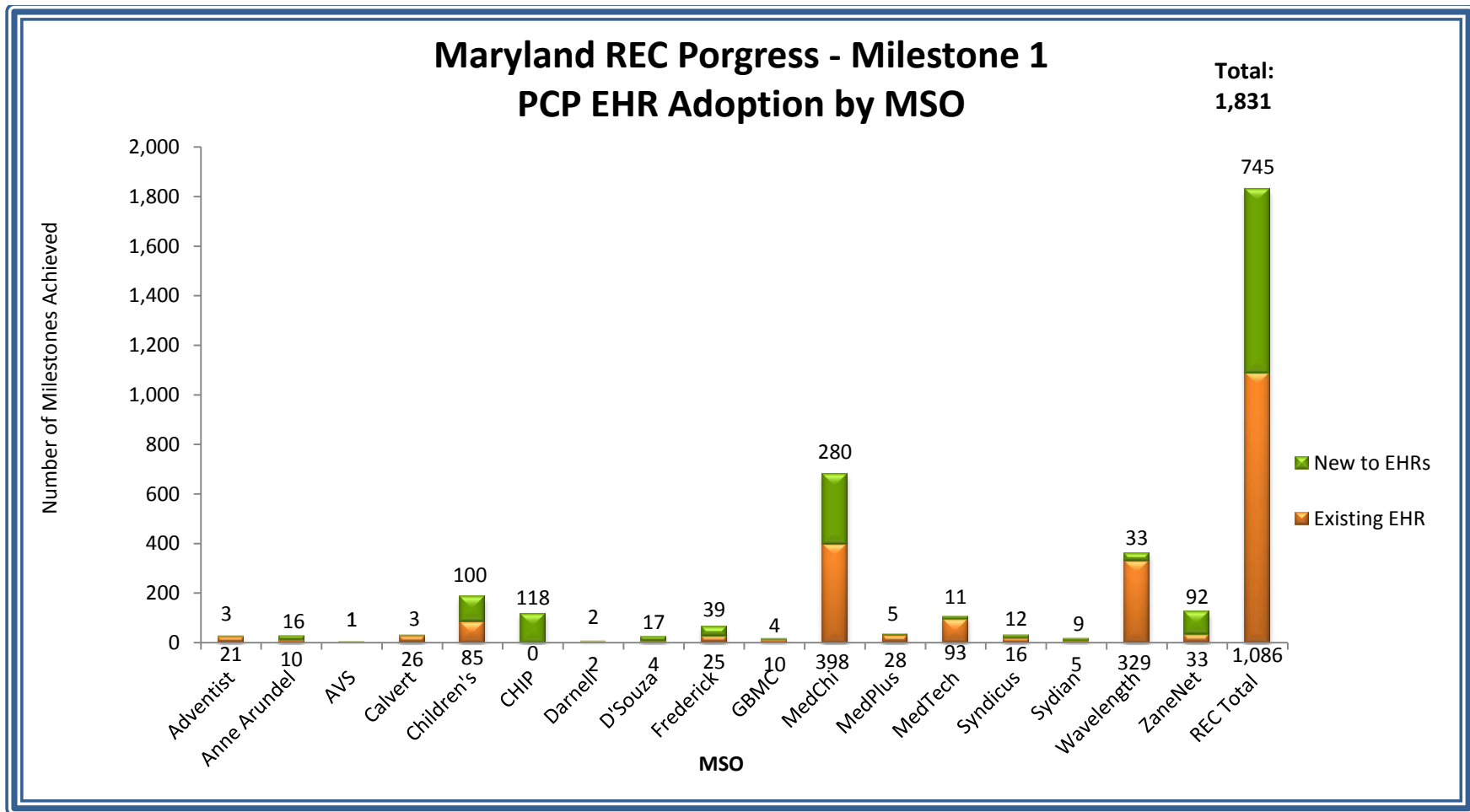
**REC:** The Regional Extension Center (REC) provides technical assistance to priority care providers in adopting and using an electronic health record (EHR)

**Milestone 1:** A priority primary care provider (PCP) that has signed a participation agreement with a management service organization (MSO)

**Milestone 2:** A PCP that has adopted an EHR and is using certain functionalities of the system

**Milestone 3:** A PCP that has achieved meaningful use defined by the Centers for Medicare & Medicaid Services



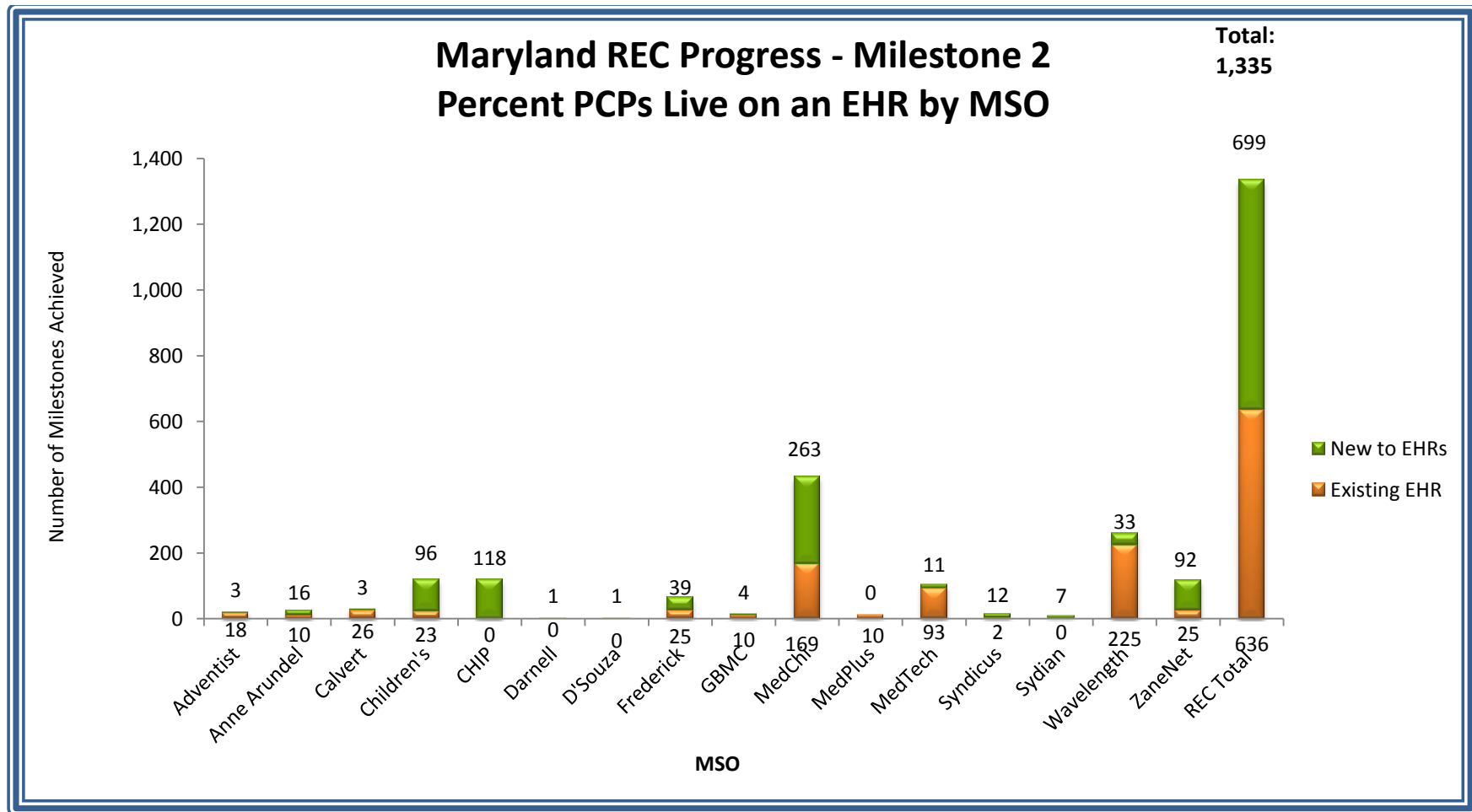
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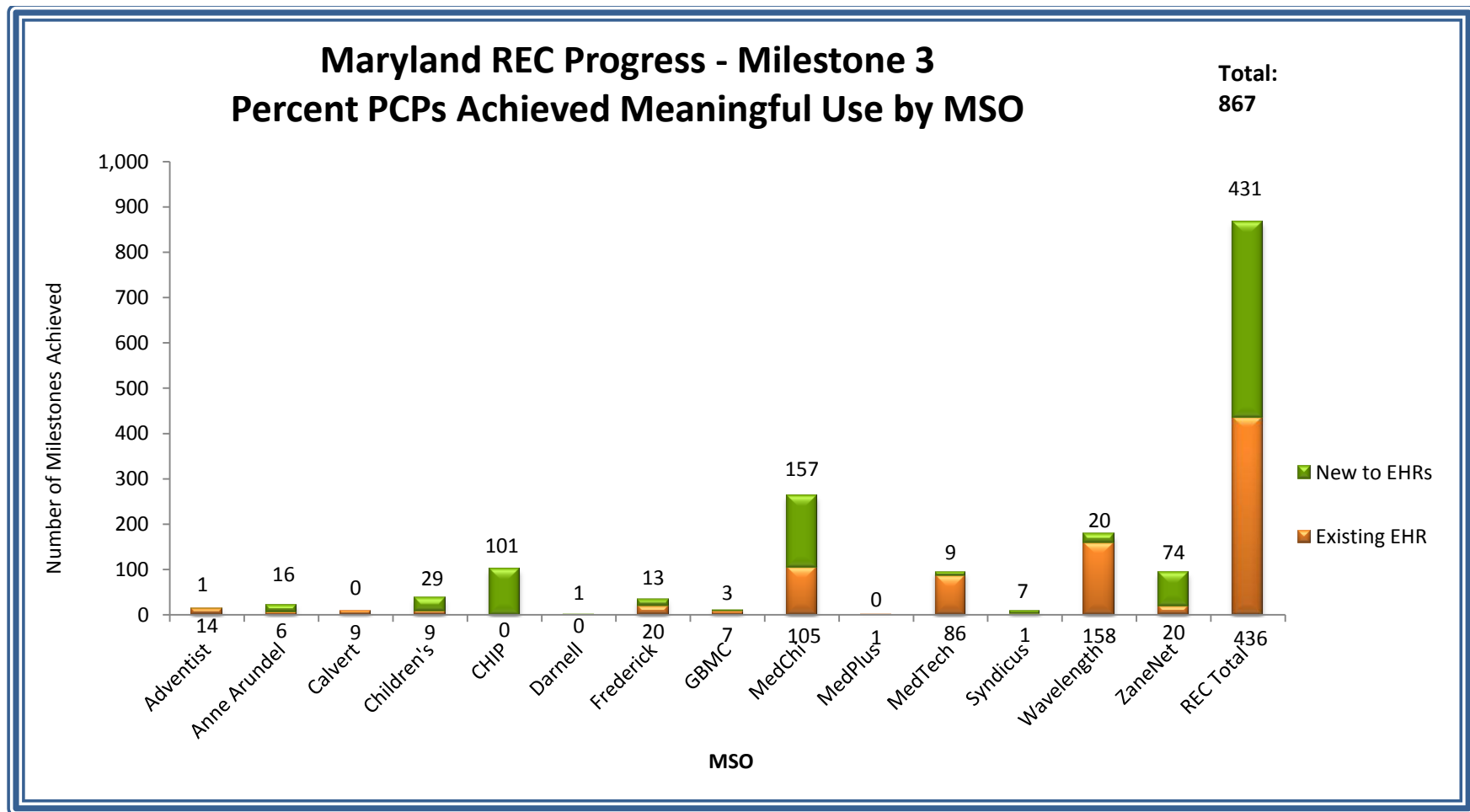
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## Hospital Data Submission and Use

| Count  | Hospital  | Current Status of Data Submission           |                   |                       | Use of Services                          |                          |        |
|--|---|---|-------------------|-----------------------|--|--------------------------|--------|
|  |   | Laboratory Reports                          | Radiology Reports | Transcribed Documents | Portal                                   | Portal - Single Sign On* | ENS    |
| 1  | Anne Arundel Medical Center   | Mar-12                                      | Mar-12            | 39                    | Jul-12                                   | 4                        | Sep-13 |
| 2  | Atlantic General Hospital   | Jun-11                                      | Jun-11            | Jun-11                | Mar-12                                   | 4                        | 16     |
| 3  | Baltimore Washington Medical Center                                 | 39  | 39                | 39                    | Mar-12                                   | 4                        | 16     |
| 4  | Bon Secours Baltimore Health System                                 | Feb-13                                      | Feb-13            | 39                    | Jan-13                                   | 4                        | 16     |
| 5  | Calvert Memorial Hospital   | Dec-12                                      | Dec-12            | Dec-12                | Feb-13                                   | 4                        | 16     |
| 6  | Carroll Hospital Center   | May-12                                      | Apr-12            | Apr-12                | Jul-12                                   | 4                        | 16     |
| 7  | Civista Medical Center  | 39  | 39                | 39                    | Jan-13                                   | 4                        | 16     |
| 8  | Doctors Community Hospital  | Sep-12                                      | Sep-13            | Dec-13                | Apr-13                                   | 4                        | Jun-13 |
| 9  | Edward McCready Memorial Hospital                                   | Aug-12                                      | 39                | 39                    | 39                                       | 4                        | 16     |
| 10   | Fort Washington Hospital  | Sep-12                                      | Mar-12            | May-12                | Sep-12                                   | 4                        | 16     |
| 11   | Frederick Memorial Hospital   | Mar-12                                      | Dec-11            | 29                    | Jul-12                                   | 4                        | 16     |
| 12   | Garrett County Memorial Hospital                                    | Jun-11                                      | Apr-12            |                       | 39                                       | 4                        | 16     |
| 13   | Greater Baltimore Medical Center                                    | Nov-12                                      | Sep-12            | Sep-12                | Jun-12                                   | 4                        | 16     |
| 14   | Harford Memorial Hospital   | Jul-12                                      | Jul-12            | Jul-12                | Aug-12                                   | 4                        | 16     |
| 15   | Holy Cross Hospital   | Sep-10                                      | Sep-10            | Sep-10                | Dec-11                                   | 4                        | 16     |
| 16   | Howard County General Hospital                                      | Feb-12                                      | Nov-11            | Nov-11                | Mar-12                                   | 4                        | 16     |
| 17   | Johns Hopkins Bayview Medical Center                                | 39  | Feb-12            | Jul-12                | Apr-12                                   | 4                        | 16     |
| 18   | Johns Hopkins Hospital  | 39  | Dec-11            | May-12                | Jul-12                                   | 4                        | 16     |
| 19   | Laurel Regional Hospital  | 39  | 39                | Jul-12                | 39                                       | 4                        | 16     |
| 20   | MedStar Franklin Square Medical Center                              | Oct-11                                      | Oct-11            | Nov-12                | Jul-12                                   | Apr-13                   | 16     |
| 21   | MedStar Good Samaritan Hospital                                     | Oct-11                                      | Oct-11            | Nov-12                | Jun-12                                   | Apr-13                   | 16     |
| 22   | MedStar Harbor Hospital   | Oct-11                                      | Sep-12            | Nov-12                | Mar-12                                   | Apr-13                   | Aug-12 |
| 23   | MedStar Montgomery Medical Center                                   | Mar-13                                      | Apr-11            | Apr-11                | Feb-12                                   | Apr-13                   | 16     |
| 24   | MedStar Southern Maryland Hospital Center                           | 26  | Jul-11            | Nov-11                | Feb-13                                   | 4                        | 16     |
| 25   | MedStar St. Mary's Hospital   | Jun-12                                      | Mar-12            | Dec-12                | Jun-13                                   | 4                        | 16     |
| 26   | MedStar Union Memorial Hospital                                     | Oct-10                                      | Oct-10            | Nov-12                | May-12                                   | Apr-13                   | 16     |
| 27   | Mercy Medical Center  | 39  | Nov-12            | 39                    | Aug-12                                   | 4                        | 16     |
| 28   | Meritus Medical Center  | Jul-12                                      | Jul-12            | Jul-12                | Sep-12                                   | 4                        | 16     |
| 29   | Northwest Hospital Center   | Dec-11                                      | Dec-11            | Aug-12                | Sep-12                                   | 4                        | 16     |
| 30   | Peninsula Regional Medical Center                                   | 39  | 39                | 39                    | 39                                       | 4                        | 16     |
| 31   | Prince George's Hospital Center                                     | 39  | 39                | Jul-12                | Apr-13                                   | 4                        | 16     |
| 32   | Shady Grove Adventist Hospital                                      | Nov-11                                      | Dec-10            | Dec-11                | Dec-11                                   | 4                        | Sep-13 |
| 33   | Sinai Hospital  | Dec-11                                      | Dec-11            | Aug-12                | Sep-12                                   | 4                        | 16     |
| 34   | St. Agnes Hospital  | Feb-12                                      | Feb-12            | Feb-12                | Dec-12                                   | 4                        | 16     |
| 35   | Suburban Hospital   | Oct-10                                      | Oct-10            | Oct-10                | Sep-11                                   | 4                        | 16     |
| 36   | Union Hospital Cecil County   | Aug-11                                      | Sep-11            | Sep-11                | Sep-12                                   | 4                        | 16     |
| 37   | University of Maryland Medical Center                               | 39  | 39                | Jul-12                | Jul-12                                   | 4                        | 16     |
| 38   | University of Maryland Medical Center Midtown Campus                | 39  | Apr-13            | Apr-13                | Feb-13                                   | 4                        | 16     |
| 39   | University of Maryland Rehabilitation & Orthopedic Institute        | 39  | 39                | Jul-12                | Apr-12                                   | 4                        | 16     |
| 40   | University of Maryland Shore Medical Center at Chester River Health | 39  | 39                | 39                    | Mar-13                                   | 4                        | 16     |
| 41   | University of Maryland Shore Medical Center at Dorchester           | 39  | 39                | 39                    | 39                                       | 4                        | 16     |
| 42   | University of Maryland Shore Medical Center at Easton               | 39  | 39                | 39                    | 39                                       | 4                        | 16     |
| 43   | University of Maryland St. Joseph Medical Center                    | May-12                                      | May-12            | 39                    | May-12                                   | 4                        | Aug-12 |
| 44   | Upper Chesapeake Medical Center                                     | Jul-12                                      | Jul-12            | Jul-12                | Aug-12                                   | 4                        | 16     |
| 45   | Washington Adventist Hospital                                       | Nov-11                                      | Dec-10            | Dec-10                | Apr-11                                   | 4                        | 16     |
| 46   | Western Maryland Health System                                      | Mar-11                                      | Mar-11            | Feb-12                | Jan-12                                   | 4                        | 16     |
| Key  |   | Total Number of Hospitals in Current Status |                   |                       | Total Number of Hospitals Using Services |                          |        |
|  |   | Laboratory Reports                          | Radiology Reports | Transcribed Documents | Portal                                   | Portal - SSO             | ENS    |
| Not Live (months in current status)  |   | 14  | 11                | 11                    | 6  | 41                       | 41     |
| Data Quality Assurance & Monitoring (months in current status)<br><i>Hospitals standardizing and mapping data for transmission</i>   |   | 1   | 0                 | 1                     | N/A                                      | N/A                      | N/A    |
| Live <i>The number of hospitals that have successfully completed the above listed activities and the date the hospital went live</i> |   | 31  | 35                | 33                    | 40                                       | 5                        | 5      |
| No plans to provide data feed  |   | 0   | 0                 | 1                     | N/A                                      | N/A                      | N/A    |

\*Note: Pilot for Single Sign On to Portal launched in April 2013 and offered to all hospitals starting in September 2013



### CRISP Portal & ENS Adoption by Facility

| Count | Organization                               | Type           | Portal Participation Agreement* | Training | Portal Live | ENS Live |
|-------|--|----------------|---------------------------------|----------|-------------|----------|
| 1     | Accokeek Drug and Health Care Inc.         | Pharmacy**     |                                 | Nov-13   | Nov-13      |          |
| 2     | Advanced Diagnostic Radiology              | Radiology      | Mar-12                          |          |             |          |
| 3     | Advanced Internal Medicine                 | Ambulatory     | Jan-13                          | Jan-13   | Jan-13      |          |
| 4     | Advanced Radiology                         | Radiology      | Sep-10                          | Mar-12   | Mar-12      |          |
| 5     | AGHS Berlin Primary Care                   | Ambulatory     | Aug-11                          | Jun-13   | Jun-13      |          |
| 6     | AGHS Townsend Medical Center               | Ambulatory     | Mar-12                          |          |             |          |
| 7     | Airpark Primary Care                       | Ambulatory     | Nov-13                          | Dec-13   | Dec-13      |          |
| 8     | All Day Medical Care Clinic                | Ambulatory     | Aug-13                          | Sep-13   | Sep-13      |          |
| 9     | All Walks of Life                          | Mental Health  | Sep-13                          |          |             |          |
| 10    | Allegany Health Nursing and Rehabilitation | Ambulatory     | Mar-12                          |          |             |          |
| 11    | Allegheny Surgical Associates              | Ambulatory     | Sep-11                          |          |             |          |
| 12    | Alliance Inc.                              | Mental Health  | Sep-13                          |          |             |          |
| 13    | Alternative Primary Care                   | Ambulatory     | May-12                          |          |             |          |
| 14    | Ambulatory Care Pharmacy - Medical Center  | Pharmacy       |                                 | Nov-13   | Nov-13      |          |
| 15    | American Health Associates Laboratory      | Laboratory     | Sep-13                          |          |             |          |
| 16    | American Radiology                         | Radiology      | Sep-10                          |          |             |          |
| 17    | Amerigroup                                 | Payor          | Nov-12                          |          |             | Feb-13   |
| 18    | Annapolis Center for Integrative Medicine  | Ambulatory     | Sep-13                          |          |             |          |
| 19    | Annapolis Internal Medicine                | Ambulatory     | Jul-13                          | Dec-13   | Dec-13      |          |
| 20    | Annapolis Neurology Associates             | Ambulatory     | Nov-13                          | Nov-13   | Dec-13      |          |
| 21    | Annapolis Primary Care                     | Ambulatory     | Sep-13                          | Aug-13   |             |          |
| 22    | Anne Arundel Medical Center                | Hospital       | Sep-11                          | Jul-12   | Jul-12      | Sep-13   |
| 23    | Anne Arundel Cancer Registry               | Ambulatory     |                                 |          |             | Jun-13   |
| 24    | Anne Arundel HealthCare Enterprises, Inc.  | Ambulatory     | Sep-11                          | Jun-13   | Jun-13      |          |
| 25    | Waugh Chapel Family Medicine               | Ambulatory     |                                 | Jul-13   | Sep-13      |          |
| 26    | South River Family Medicine                | Ambulatory     |                                 | Jun-13   | Jul-13      |          |
| 27    | Anne Arundel Physician Group               | Ambulatory     | Jul-13                          |          |             |          |
| 28    | Anne Arundel Urology                       | Ambulatory     | Apr-13                          | Mar-13   | Apr-13      |          |
| 29    | Anthony & Banerjee MD PA                   | Ambulatory     | Feb-13                          | Feb-13   |             |          |
| 30    | Apple Discount Drugs                       | Ambulatory     | Aug-12                          | Oct-12   | Oct-12      |          |
| 31    | Arcola Health and Rehab Center             | Long Term Care | Dec-12                          | Mar-12   |             |          |
| 32    | Arthritis & Rheumatism Associates          | Ambulatory     | Feb-12                          | Mar-12   | Mar-12      |          |
| 33    | Arundel Lodge                              | Mental Health  | Aug-13                          | Nov-13   | Nov-13      | Nov-13   |
| 34    | Associates in Cardiology                   | Ambulatory     | Aug-11                          | Dec-11   | Sep-13      |          |
| 35    | Atlantic General Hospital                  | Hospital       | Aug-11                          | Mar-12   | Mar-12      |          |
| 36    | Baltimore Medical System, Inc.             | FQHC           | Oct-13                          | Oct-13   | Oct-13      | Nov-13   |
| 37    | Baltimore Nuerosurgery and Spine Center    | Ambulatory     | Oct-11                          |          |             |          |
| 38    | Baltimore Washington Medical Center        | Hospital       | Aug-11                          | Mar-12   | Mar-12      |          |
| 39    | Bay Crossing Family Medicine               | Ambulatory     | Apr-13                          | May-13   | May-13      | Jun-13   |
| 40    | Bay Hundred Medical Center                 | FQHC           | Dec-13                          | Dec-13   | Dec-13      |          |
| 41    | Bayside Family Practice                    | Ambulatory     | Nov-13                          |          |             | Dec-13   |
| 42    | Bayview Care Center (JHU)                  | Ambulatory     | Aug-11                          | Apr-12   | Apr-12      |          |
| 43    | Bethesda Medical Associates                | Ambulatory     | Jun-11                          | Dec-11   | Jan-12      |          |
| 44    | BH Health Services                         | Ambulatory     | Apr-13                          |          |             |          |
| 45    | BioReference Laboratories                  | Laboratory     | Mar-13                          |          |             |          |
| 46    | Bon Secours Baltimore Health System        | Hospital       | Jan-12                          |          | Jan-13      |          |
| 47    | Bowie Health Center                        | Ambulatory     | Jul-13                          | Aug-13   | Jul-13      |          |
| 48    | Bowie Internal Medicine                    | Ambulatory     | May-12                          | May-12   | May-12      |          |
| 49    | Braddock Oncology Associates               | Ambulatory     | Apr-13                          | Jan-13   | Apr-13      |          |
| 50    | Bravo                                      | Payor          | Dec-12                          |          |             | Dec-12   |
| 51    | Bravo Health Advanced Care Center          | Ambulatory     | Feb-13                          |          |             |          |

### CRISP Portal & ENS Adoption by Facility

| Count | Organization                                   | Type              | Portal Participation Agreement* | Training | Portal Live | ENS Live |
|-------|--|-------------------|---------------------------------|----------|-------------|----------|
| 52    | Bread for the City                             | FQHC              | Oct-13                          |          |             |          |
| 53    | Broadmead Medical Services                     | Ambulatory        | Apr-12                          |          |             |          |
| 54    | Calvert County Nursing Center                  | Long Term Care    | Feb-12                          |          |             |          |
| 55    | Calvert Internal Medicine Group                | Ambulatory        | Mar-12                          | Jul-12   | Jul-12      | Oct-12   |
| 56    | Calvert Manor Healthcare Inc.                  | Long Term Care    | Jun-12                          | Jul-12   | Jul-12      |          |
| 57    | Calvert Memorial Hospital                      | Hospital          | Aug-11                          |          | Feb-13      |          |
| 58    | Cambridge Pediatrics                           | Ambulatory        | Feb-12                          | Mar-12   | Mar-12      | Jun-13   |
| 59    | Cancer Care Center of Frederick                | Ambulatory        | Mar-11                          | Mar-11   | Mar-11      |          |
| 60    | Capital Primary Care                           | Ambulatory        | Apr-13                          |          |             |          |
| 61    | Cardiovascular Specialists of Central MD       | Ambulatory        | Aug-11                          | Nov-11   |             |          |
| 62    | Carefirst                                      | Payor             | Jul-13                          |          |             | Nov-13   |
| 63    | Care Connection Inc.                           | Ambulatory        | Jul-13                          | Aug-13   |             |          |
| 64    | Caroline Nursing & Rehab Center                | Long Term Care    | Jan-12                          |          |             |          |
| 65    | Caroll Health Group                            | Ambulatory        | Aug-11                          | Jan-13   | Jan-13      |          |
| 66    | Carroll Hospital Center                        | Hospital          | Aug-11                          | Jul-12   | Jul-12      |          |
| 67    | The Casey Health Institute                     | Ambulatory        | Nov-13                          |          |             |          |
| 68    | Catholic Charities Child & Family Services     | Mental Health     | Sep-13                          |          |             |          |
| 69    | Cecil County Health Department                 | Government Agency | Dec-12                          |          |             |          |
| 70    | Center for Sleep and Wake Disorders            | Ambulatory        | Jan-11                          |          |             |          |
| 71    | Centreville Family Medicine                    | Ambulatory        |                                 | Aug-13   |             |          |
| 72    | Centennial Medical Group                       | Ambulatory        | May-13                          | Jun-13   | Jun-13      | Jun-13   |
| 73    | Central Maryland Urology Associates            | Ambulatory        | Nov-12                          |          |             |          |
| 74    | Channel Marker Inc.                            | Mental Health     | Nov-13                          |          |             |          |
| 75    | Chapel View Family Care                        | Ambulatory        | Apr-13                          | Jul-13   | Aug-13      |          |
| 76    | Charlotte Hall Veterans Home                   | Long Term Care    | Nov-12                          | Nov-12   | Nov-12      |          |
| 77    | Charter Internal Medicine, LLC                 | Ambulatory        | Mar-13                          | Mar-13   | Mar-13      |          |
| 78    | Chase Brexton Health Services                  | Ambulatory        | Apr-13                          | Jun-13   | Jul-13      | Jun-13   |
| 79    | CBHS - Columbia                                | Ambulatory        |                                 | Aug-13   | Oct-13      |          |
| 80    | CBHS - Easton                                  | Ambulatory        |                                 | Jul-13   | Jul-13      |          |
| 81    | CBHS - Mt. Vernon Center                       | Ambulatory        |                                 | Sep-13   | Oct-13      |          |
| 82    | CBHS - Randallstown                            | Ambulatory        |                                 | Jun-13   | Jul-13      |          |
| 83    | Chesapeake Otolaryngology Associates           | Ambulatory        | Jul-13                          | Aug-13   | Sep-13      |          |
| 84    | Chesapeake Potomac Regional Cancer Center      | Ambulatory        | Mar-12                          | Jul-12   | Jul-12      |          |
| 85    | Children's Medical Group                       | Ambulatory        | May-12                          | Jul-12   | Jul-12      |          |
| 86    | Choptank Community Health Services, Inc.       | FQHC              | Dec-13                          | Nov-13   | Dec-13      |          |
| 87    | Citizens Care & Rehabilitation Center          | Long Term Care    | May-13                          |          |             |          |
| 88    | Civista Medical Center                         | Hospital          | Aug-11                          | Jan-13   | Jan-13      |          |
| 89    | Clinical Associates                            | Ambulatory        | May-13                          | Jun-13   | Jul-13      |          |
| 90    | Collingswood Nursing and Rehabilitation Center | Long Term Care    | Jul-13                          |          |             |          |
| 91    | Columbia Medical Practice                      | Ambulatory        | Feb-13                          | Sep-13   | Sep-13      | Apr-13   |
| 92    | Community Clinics Inc.                         | Ambulatory        | Apr-13                          | Jul-12   |             | Dec-13   |
| 93    | Community Family Medicine                      | Ambulatory        | Apr-11                          |          |             |          |
| 94    | Community of Hope, Inc.                        | FQHC              | Oct-13                          |          |             |          |
| 95    | Community Radiology Associates                 | Ambulatory        | Sep-10                          | Dec-11   | Dec-11      |          |
| 96    | Comprehensive Primary Care                     | Ambulatory        | Aug-12                          | Jun-12   | Nov-12      | Nov-13   |
| 97    | Comprehensive Women's Health                   | Ambulatory        | Aug-12                          | Jul-12   | Jul-12      |          |
| 98    | Contact Lens Associates                        | Ambulatory        | Jun-13                          | Jun-13   | Sep-13      |          |
| 99    | Cyriac and Mundra MD PA                        | Ambulatory        | Nov-13                          |          |             |          |
| 100   | Dawn A. Broderick, M.D.                        | Ambulatory        | Oct-13                          |          |             |          |
| 101   | Deepak Seth, MD                                | Ambulatory        | Jun-13                          |          |             |          |
| 102   | Denton Medical Center                          | FQHC              | Dec-13                          | Dec-13   | Dec-13      |          |

### CRISP Portal & ENS Adoption by Facility

| Count | Organization                                 | Type              | Portal Participation Agreement* | Training | Portal Live | ENS Live |
|-------|--|-------------------|---------------------------------|----------|-------------|----------|
| 103   | Desai Medical Center                         | Ambulatory        | Aug-13                          |          |             |          |
| 104   | Desai & Holmes                               | Ambulatory        | Feb-13                          | Feb-13   | Feb-13      |          |
| 105   | Devlin Manor                                 | Long Term Care    | Mar-11                          |          |             |          |
| 106   | DHMH - Office of Health Services             | Government Agency | Dec-12                          |          |             |          |
| 107   | Digestive Disease Associates                 | Ambulatory        | Dec-11                          | Dec-12   |             |          |
| 108   | Dobin & Heck Internal Medicine               | Ambulatory        | Apr-12                          | Jul-12   | Jul-12      |          |
| 109   | Doctors Community Hospital                   | Hospital          | Oct-11                          | Apr-13   | Apr-13      | Jun-13   |
| 110   | Doctors Regional Cancer Center               | Ambulatory        | Jan-13                          | Sep-12   | Sep-12      |          |
| 111   | Donald Bousel, MD                            | Ambulatory        | Oct-12                          |          |             |          |
| 112   | Downtown Baltimore Family Care               | Ambulatory        | Oct-13                          | Feb-13   | Oct-13      |          |
| 113   | Dr. David A Schwartz, MD                     | Ambulatory        | Jan-13                          | Jan-13   | Jan-13      |          |
| 114   | Dr. Jhansi R. Ganesan, MD                    | Ambulatory        | Apr-13                          |          |             |          |
| 115   | Dr. Peter Uggowitz, MD                       | Ambulatory        | Oct-12                          |          |             |          |
| 116   | Dr. Robin Bissell                            | Ambulatory        | Sep-13                          | Oct-13   | Oct-13      |          |
| 117   | Dr. Vinu Ganti                               | Ambulatory        | Jun-13                          | Sep-13   | Oct-13      |          |
| 118   | Dragos Popescu, MD                           | Ambulatory        | Dec-12                          | Dec-12   | Dec-12      |          |
| 119   | Drs. Gehris, Jordan, Day and Associates, LLC | Ambulatory        | Oct-12                          | Oct-12   | Oct-12      |          |
| 120   | Drs. Schreiber and Kelsey                    | Ambulatory        | May-13                          |          |             |          |
| 121   | Drs. Shanahan and Ferguson                   | Ambulatory        | May-13                          | Jun-13   |             |          |
| 122   | Dundalk Pediatrics Associates, P.A.          | Ambulatory        | Apr-13                          |          |             |          |
| 123   | Eastern Avenue Health Solutions              | Mental Health     | Nov-13                          | Dec-13   |             |          |
| 124   | Eastern Shore Pediatrics LLC                 | Ambulatory        | May-13                          | Oct-13   | Oct-13      |          |
| 125   | Eastern Shore Primary Care                   | Ambulatory        | Dec-13                          |          |             |          |
| 126   | Edge Medical Care PC                         | Ambulatory        | Jun-13                          | Sep-13   | Sep-13      |          |
| 127   | Edward McCready Memorial Hospital            | Hospital          | Aug-11                          |          |             |          |
| 128   | Egle Nursing & Rehabilitation Center         | Long Term Care    | May-13                          | Jul-13   | Jul-13      | Jun-13   |
| 129   | Ellicott City Pediatric Associates           | Ambulatory        | Aug-13                          | Aug-13   | Oct-13      |          |
| 130   | Emmitburg Osteopathic Primary Care           | Ambulatory        | Feb-11                          | Nov-11   | Nov-11      |          |
| 131   | Endoscopic Microsurgery Associates           | Ambulatory        | Oct-13                          |          |             |          |
| 132   | Erickson Living                              | Long Term Care    | Sep-11                          | Mar-12   |             |          |
| 133   | Evergreen Health Care                        | Ambulatory        | Nov-13                          | Dec-13   | Dec-13      |          |
| 134   | Fairwood Spine and Pain Center               | Ambulatory        | Jun-13                          |          |             |          |
| 135   | Falls Medical Specialists                    | Ambulatory        | Sep-13                          | Sep-13   | Oct-13      |          |
| 136   | Family & Medical Counseling Services         | Mental Health     | Nov-13                          |          |             |          |
| 137   | Family Care of Easton                        | Ambulatory        | May-12                          | Jul-12   | Jul-12      |          |
| 138   | Family Health Care of Germantown             | Ambulatory        | Jul-11                          | Nov-11   | Nov-11      | Mar-13   |
| 139   | Family Health Center                         | Ambulatory        | Nov-11                          | Nov-11   | Nov-11      | Sep-13   |
| 140   | Family Health Centers of Baltimore           | FQHC              | Oct-13                          |          |             |          |
| 141   | Family Services                              | Ambulatory        | Jun-12                          | Jun-12   | Jun-12      |          |
| 142   | Farragut Internal Medicine                   | Ambulatory        | Nov-11                          | Nov-11   | Nov-11      |          |
| 143   | Fassett Magee Health Center                  | FQHC              | Dec-13                          | Dec-13   | Dec-13      |          |
| 144   | Fast Track Urgent Care                       | Ambulatory        | Nov-12                          | Oct-13   | Oct-13      |          |
| 145   | Federsburg Medical Center                    | FQHC              | Dec-13                          | Dec-13   | Dec-13      |          |
| 146   | Five Star Physician Services, LLC            | Ambulatory        | May-13                          | Aug-13   | Sep-13      |          |
| 147   | Forest Haven Nursing Home                    | Long Term Care    | Sep-13                          | Oct-13   | Oct-13      |          |
| 148   | Fort Washington Hospital                     | Hospital          | Sep-11                          | Aug-12   | Sep-12      |          |
| 149   | Frederick Gastroenterology Associates        | Ambulatory        | Jul-13                          | Jul-13   | Aug-13      |          |
| 150   | Frederick Memorial Hospital                  | Hospital          | Jun-11                          | Jul-12   | Jul-12      |          |
| 151   | Frederick Primary Care Associates            | Ambulatory        | Sep-13                          |          |             | Nov-13   |
| 152   | Garrett County Memorial Hospital             | Hospital          | Apr-11                          |          |             |          |
| 153   | Garrett Medical Group, P.A.                  | Ambulatory        | Jun-12                          |          |             |          |



### CRISP Portal & ENS Adoption by Facility

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|-------|--|----------------|---------------------------------|----------|-------------|----------|
| 154   | Garrett Surgical Group                   | Ambulatory     | Aug-12                          |          |             |          |
| 155   | Genesis Healthcare                       | Long Term Care | Oct-13                          | Dec-13   | Dec-13      |          |
| 156   | Genesis Cromwell Facility                | Long Term Care |                                 |          |             |          |
| 157   | Genesis Franklin Woods                   | Long Term Care |                                 |          |             |          |
| 158   | Genesis Heritage Center                  | Long Term Care |                                 |          |             |          |
| 159   | Gerald Family Care                       | Ambulatory     | Sep-11                          | Apr-13   | Apr-13      | Jan-13   |
| 160   | Go-Getters                               | Mental Health  | Aug-13                          | Aug-13   | Sep-13      | Nov-13   |
| 161   | Goldsboro Medical Center                 | FQHC           | Dec-13                          | Dec-13   | Dec-13      |          |
| 162   | Greater Baltimore Medical Center         | Hospital       | Jan-10                          | Jun-12   | Jun-12      |          |
| 163   | Greater Baltimore Medical Associates     | Ambulatory     | Jun-12                          | Nov-12   | Nov-12      | Aug-12   |
| 164   | Green Spring Internal Medicine           | Ambulatory     | Feb-12                          | Feb-12   | Feb-12      | Apr-13   |
| 165   | GS Surgical Services, LLC                | Ambulatory     | Jul-12                          | Mar-13   | Apr-13      |          |
| 166   | Harford-Belair Community Mental Health   | Mental Health  | Sep-13                          |          |             |          |
| 167   | Harford Memorial Hospital                | Hospital       | Nov-11                          | Aug-12   | Aug-12      |          |
| 168   | Health Care for the Homeless MD          | Ambulatory     | May-13                          | May-13   | Oct-13      |          |
| 169   | Healthy Steps                            | Ambulatory     | Aug-11                          | Jan-12   | Jan-12      |          |
| 170   | Hebrew Home of Greater Washington        | Long Term Care | Feb-12                          | Apr-12   | May-12      |          |
| 171   | Holy Cross - Aspen Hill Health Center    | Ambulatory     | Sep-10                          | Jul-12   | Aug-12      |          |
| 172   | Holy Cross - Silver Spring Health Center | Ambulatory     | Nov-11                          | Nov-12   | Nov-12      |          |
| 173   | Holy Cross Employee Health               | Ambulatory     | Oct-11                          | Jan-09   | Jan-09      |          |
| 174   | Holy Cross Health Center                 | Ambulatory     | Sep-10                          | Nov-11   | Nov-11      |          |
| 175   | Holy Cross Hospital                      | Hospital       | Sep-10                          | Dec-11   | Dec-11      |          |
| 176   | Hope Health Systems                      | Ambulatory     | Nov-12                          | Oct-13   | Oct-13      |          |
| 177   | Howard County General Hospital           | Hospital       | Aug-11                          | Mar-12   | Mar-12      |          |
| 178   | Humanim                                  | Ambulatory     | Jul-13                          | Sep-13   | Sep-13      | Aug-13   |
| 179   | Ingleside at King's Farm                 | Long Term Care | May-13                          | Jun-13   | Jun-13      | Jun-13   |
| 180   | Institutes for Behavior Resources        | Mental Health  | Sep-13                          | Sep-13   | Sep-13      |          |
| 181   | Irina A. Skopets, MD, PA                 | Ambulatory     | Sep-13                          | Sep-13   | Oct-13      |          |
| 182   | Janjua Neurology                         | Ambulatory     | Feb-13                          | Jan-13   | Feb-13      |          |
| 183   | Jarrettsville Family Care                | Ambulatory     | Sep-12                          | Sep-12   | Sep-12      |          |
| 183   | JHCP Annapolis***                        | Ambulatory     | Apr-12                          | Aug-12   | Aug-12      |          |
|       | JHCP Bowie                               | Ambulatory     |                                 | Aug-12   | Aug-12      |          |
|       | JHCP Canton Crossing                     | Ambulatory     |                                 | Jun-12   | Jun-12      | Sep-12   |
|       | JHCP Charles County                      | Ambulatory     |                                 | Aug-12   | Sep-12      |          |
|       | JHCP Cranberry Station                   | Ambulatory     |                                 |          |             |          |
|       | JHCP Downtown Bethesda                   | Ambulatory     |                                 | Jul-12   | Jul-12      |          |
|       | JHCP East Baltimore                      | Ambulatory     |                                 | Aug-12   | Aug-12      |          |
|       | JHCP Frederick                           | Ambulatory     |                                 | Aug-12   | Aug-12      |          |
|       | JHCP Fulton                              | Ambulatory     |                                 | Jun-13   | Jul-13      |          |
|       | JHCP Germantown                          | Ambulatory     |                                 | Jul-13   | Jul-13      |          |
|       | JHCP Glen Burnie                         | Ambulatory     |                                 | Aug-12   | Sep-12      |          |
|       | JHCP Greater Dundalk                     | Ambulatory     |                                 | Jul-12   | Aug-12      |          |
|       | JHCP Green Spring                        | Ambulatory     |                                 | Aug-12   | Aug-12      |          |
|       | JHCP Hager Park Health Center            | Ambulatory     |                                 |          |             |          |
|       | JHCP Hagerstown                          | Ambulatory     |                                 | May-12   | May-12      | Sep-12   |
|       | JHCP Heart Care                          | Ambulatory     |                                 | Oct-13   | Oct-13      |          |
|       | JHCP Howard County                       | Ambulatory     |                                 | Aug-12   | Aug-12      |          |
|       | JHCP Kent Island                         | Ambulatory     |                                 | Sep-12   | Sep-12      |          |
|       | JHCP Laurel                              | Ambulatory     |                                 | Aug-12   | Aug-12      |          |
|       | JHCP Laurel Health Center                | Ambulatory     |                                 |          |             |          |
|       | JHCP Monocacy Valley Health Center       | Ambulatory     |                                 |          |             |          |

### CRISP Portal & ENS Adoption by Facility

| Count              | Organization   | Type              | Portal Participation Agreement* | Training | Portal Live | ENS Live |
|--------------------|--|-------------------|---------------------------------|----------|-------------|----------|
| 183<br>(Continued) | JHCP Montgomery Grove  | Ambulatory        |                                 | May-12   | May-12      | Sep-12   |
|                    | JHCP North Bethesda  | Ambulatory        |                                 | Jul-12   | Jul-12      |          |
|                    | JHCP OBGYN at Columbia   | Ambulatory        |                                 |          |             |          |
|                    | JHCP Odenton   | Ambulatory        |                                 | Aug-12   | Aug-12      |          |
|                    | JHCP Riverside   | Ambulatory        |                                 |          |             |          |
|                    | JHCP Rockville   | Ambulatory        |                                 | Jul-12   | Jul-12      |          |
|                    | JHCP Sibley Medical  | Ambulatory        |                                 |          |             |          |
|                    | JHCP Water's Edge  | Ambulatory        |                                 | Jun-12   | Jun-12      | Sep-12   |
|                    | JHCP Westminster   | Ambulatory        |                                 | Aug-12   | Sep-12      |          |
|                    | JHCP White Marsh   | Ambulatory        |                                 | Aug-12   | Aug-12      |          |
|                    | JHCP Wyman Park  | Ambulatory        |                                 | Jul-12   | Jul-12      | Sep-12   |
| 184                | Johns Hopkins Bayview Medical Center                           | Hospital          | Aug-11                          | Apr-12   | Apr-12      |          |
| 185                | Johns Hopkins Healthcare Priority Partners                     | Payor             | Nov-12                          |          |             | Jan-13   |
| 186                | Johns Hopkins Hospital   | Hospital          | Aug-11                          | Jul-12   | Jul-12      |          |
| 187                | JCHIP Community  | Payor             |                                 | Oct-13   | Oct-13      | Jul-13   |
| 188                | JCHIP KnownCAD   | Payor             |                                 |          |             | Jun-13   |
| 189                | Johnston Family Medicine                                       | Ambulatory        | May-13                          |          |             |          |
| 190                | John M. Lee MD PA  | Ambulatory        | Oct-13                          | Oct-13   | Nov-13      |          |
| 191                | Kingdom Medicine P.A.  | Ambulatory        | Mar-13                          | Mar-13   | Mar-13      |          |
| 192                | La Clinica del Pueblo  | FQHC              | Dec-13                          |          |             |          |
| 193                | Labcorp  | Laboratory        | Sep-10                          |          |             |          |
| 194                | Laurel Medical Associates                                      | Ambulatory        | Jul-13                          |          |             |          |
| 195                | Laurel Regional Hospital                                       | Hospital          | Jul-11                          | Jul-13   | Sep-13      |          |
| 196                | Leisure World Medical Center                                   | Long Term Care    | Jul-11                          | Nov-11   | Dec-11      |          |
| 197                | LifEBridge Courtland Gardens                                   | Long Term Care    | Oct-10                          |          |             |          |
| 198                | LifEBridge Levindale   | Long Term Care    | Oct-10                          |          |             |          |
| 199                | LifEBridge Health - Sinai Ambulatory Practice                  | Ambulatory        |                                 |          |             | Jun-13   |
| 200                | Lois A. Narr, D.O.   | Ambulatory        | Sep-13                          | Sep-13   |             |          |
| 201                | Long View Nursing Home   | Long Term Care    | Mar-12                          | Apr-12   |             |          |
| 202                | Lorien Bel Air   | Long Term Care    | Jan-12                          | May-12   | May-12      |          |
| 203                | Lorien Columbia  | Long Term Care    | Jan-12                          |          |             |          |
| 204                | Lorien Encore at Turf Valley                                   | Long Term Care    | Jan-12                          |          |             |          |
| 205                | Lorien Mays Chapel   | Long Term Care    | Jan-12                          |          |             |          |
| 206                | Lorien Mt. Airy  | Long Term Care    | Jan-12                          |          |             |          |
| 207                | Lorien Riverside   | Long Term Care    | Jan-12                          |          |             |          |
| 208                | Lorien Taneytown   | Long Term Care    | Jan-12                          |          |             |          |
| 209                | Man Alive Inc. Lane Treatment Center                           | Mental Health     | Sep-13                          | Dec-13   | Dec-13      |          |
| 210                | Manchester Medical Group, LLC                                  | Ambulatory        | Mar-13                          | Mar-13   | Mar-13      |          |
| 211                | Manoj Mathur, M.D.   | Ambulatory        | Dec-11                          |          |             |          |
| 212                | Maple Shade Youth & Family Services                            | Mental Health     | Oct-13                          |          |             |          |
| 213                | Marie A. Dobyns, MD, PA  | Ambulatory        | Jul-13                          | Jul-13   | Sep-13      | Aug-13   |
| 214                | Mary's Center  | FQHC              | Dec-13                          |          |             |          |
| 215                | Maryland Department of Health and Mental Hygiene               | Government Agency | Dec-12                          |          |             |          |
| 216                | Maryland Department of Public Safety and Correctional Services | Government Agency | Dec-12                          |          |             |          |
| 217                | Maryland Kidney Group  | Ambulatory        | Sep-12                          | Jul-13   | Jul-13      |          |
| 218                | Maryland Oncology and Hematology                               | Ambulatory        | Jan-13                          | Jan-13   | Jan-13      |          |
| 219                | Maryland Open MRI  | Radiology         | Nov-12                          |          |             |          |
| 220                | Maryland Primary Care Physicians                               | Ambulatory        | Apr-13                          | Apr-13   | Apr-13      |          |
| 221                | MPCP Columbia  | Ambulatory        |                                 | Feb-13   | Sep-13      |          |

### CRISP Portal & ENS Adoption by Facility

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|-------|--|----------------|---------------------------------|----------|-------------|----------|
| 222   | MD Laser Medicine & Surgery                          | Ambulatory     | Aug-13                          |          |             |          |
| 223   | Medpeds  | Ambulatory     | May-12                          | Jul-12   | Jul-12      | Dec-12   |
| 224   | MedStar Family Choice                                | FQHC           | Aug-13                          |          |             | Dec-13   |
| 225   | MedStar Franklin Square Medical Center               | Hospital       | Jun-11                          | Jul-12   | Jul-12      |          |
| 226   | MedStar Good Samaritan Hospital                      | Hospital       | Jun-11                          | Jun-12   | Jun-12      |          |
| 227   | MedStar Harbor Hospital                              | Hospital       | Jun-11                          | Mar-12   | Mar-12      | Aug-12   |
| 228   | MedStar Montgomery Medical Center                    | Hospital       | Jun-11                          | Dec-11   | Feb-12      |          |
| 229   | Medstar National Rehabilitation Network              | Hospital       | Jun-11                          | Mar-13   | Mar-13      |          |
| 230   | MedStar Southern Maryland Hospital Center            | Hospital       | Dec-10                          | Feb-13   | Feb-13      |          |
| 231   | MedStar St. Mary's Hospital                          | Hospital       | Jun-11                          | May-13   | Jun-13      |          |
| 232   | MedStar Union Memorial Hospital                      | Hospital       | Jun-11                          | May-12   | May-12      |          |
| 233   | Mercy Medical Center                                 | Hospital       | Sep-11                          | Aug-12   | Aug-12      |          |
| 234   | Meritus Medical Center                               | Hospital       | Nov-11                          | Sep-12   | Sep-12      |          |
| 235   | Metro Infectious Disease Control                     | Ambulatory     | Aug-12                          |          |             |          |
| 236   | Mian Family Medicine                                 | Ambulatory     | Mar-11                          | Dec-11   | Dec-11      |          |
| 237   | Michael Randolph, MD, PC                             | Ambulatory     | Oct-12                          | Oct-13   | Oct-13      |          |
| 238   | Mid-Atlantic - Delaware                              | Ambulatory     | Mar-12                          |          |             |          |
| 239   | Mid-Atlantic Allegheny Health Nursing & Rehab Center | Long Term Care | Mar-12                          |          |             |          |
| 240   | Mid-Atlantic Berlin Nursing & Rehab Center           | Long Term Care | May-13                          | Aug-13   | Sep-13      | Sep-13   |
| 241   | Mid-Atlantic Chapel Hill Nursing & Rehab Center      | Long Term Care | Mar-12                          |          |             |          |
| 242   | Mid-Atlantic Fairfield Nursing & Rehab Center        | Long Term Care | Mar-12                          |          |             |          |
| 243   | Mid-Atlantic Nephrology Associates                   | Ambulatory     | Sep-13                          | Sep-13   | Oct-13      |          |
| 244   | Mid-Atlantic Oakland Nursing & Rehab Center          | Long Term Care | Mar-12                          |          |             |          |
| 245   | Mid-Atlantic Pain Medicine Center                    | Ambulatory     | Aug-13                          | Sep-13   | Sep-13      |          |
| 246   | Mid-Atlantic Villa Rosa Nursing Home                 | Long Term Care | Mar-12                          |          |             |          |
| 247   | Middletown Valley Family Medicine, P.A.              | Ambulatory     | Oct-13                          | Oct-13   | Oct-13      |          |
| 248   | Mitchell Gittelman, DO,PA                            | Ambulatory     | Dec-13                          |          |             |          |
| 249   | Mody & Miller MD PA                                  | Ambulatory     | Jan-13                          |          |             |          |
| 250   | Montgomery Medical Associates, P.C.                  | Ambulatory     | May-13                          | Jun-13   | Nov-13      | Nov-13   |
| 251   | Montgomery Recovery Services                         | Ambulatory     | Sep-13                          | Oct-13   | Oct-13      | Nov-13   |
| 252   | Mosiac Community Services                            | Ambulatory     | Jan-13                          | Jan-13   | Jan-13      | Dec-13   |
| 253   | Mountain Laurel Medical Center                       | Ambulatory     | Apr-12                          | Jun-12   | Jun-12      |          |
| 254   | Mt. Washington Pediatric                             | Hospital       | Jun-11                          |          |             |          |
| 255   | N.B. Vellanki, MD                                    | Ambulatory     | Apr-13                          |          |             |          |
| 256   | Natural Family Wellness                              | Ambulatory     | May-12                          | Apr-12   | Apr-12      | Dec-13   |
| 257   | Neil Lattin M.D. LLC                                 | Ambulatory     | Aug-12                          | Aug-12   | Aug-12      |          |
| 258   | Nephrology Associates PA                             | Ambulatory     | Mar-13                          |          |             |          |
| 259   | Nephrology Center of Maryland                        | Ambulatory     | Jan-12                          |          |             |          |
| 260   | Northwest Hospital Center                            | Hospital       | Oct-10                          |          | Sep-12      |          |
| 261   | NMS Healthcare Facilities                            | Long Term Care | May-13                          | May-13   | May-13      | Jul-13   |
| 262   | NMS Healthcare Hagerstown                            | Long Term Care |                                 | May-13   | May-13      |          |
| 263   | NMS Healthcare Hyattsville                           | Long Term Care |                                 | May-13   | May-13      |          |
| 264   | Omni Medical Center                                  | Ambulatory     | Nov-12                          | Oct-12   |             |          |
| 265   | Optimum Health Systems Inc.                          | Mental Health  | Dec-13                          | Dec-13   | Dec-13      |          |
| 266   | OrthoBethesda  | Ambulatory     | Feb-13                          |          |             |          |
| 267   | Owensville Primary Care, Inc                         | Ambulatory     | Sep-13                          | Aug-13   | Sep-13      |          |
| 268   | Pediatric & Adolescent Care of Silver Spring         | Ambulatory     | Dec-13                          |          |             |          |
| 269   | Peninsula Health Group                               | Ambulatory     |                                 | Aug-13   |             |          |
| 270   | Peninsula Regional Medical Center                    | Hospital       | Nov-11                          | May-13   | Sep-13      |          |
| 271   | Park Medical Associates                              | Ambulatory     | Dec-13                          | Dec-13   |             |          |
| 272   | People's Community Health Centers                    | Ambulatory     | Jan-13                          | Feb-13   | Feb-13      | Aug-13   |



### CRISP Portal & ENS Adoption by Facility

| Count | Organization                                    | Type              | Portal Participation Agreement* | Training | Portal Live | ENS Live |
|-------|---|-------------------|---------------------------------|----------|-------------|----------|
| 273   | People Encouraging People, Inc.                 | Ambulatory        | Apr-13                          | Jul-13   | Jul-13      | Jul-13   |
| 274   | Phillip Konits MD LLC                           | Ambulatory        |                                 | Apr-13   |             |          |
| 275   | Physicians House Calls                          | Long Term Care    | Sep-13                          | Sep-13   | Sep-13      | Dec-13   |
| 276   | Piccard Surgery Center, LLC                     | Ambulatory        | Nov-13                          | May-13   | May-13      |          |
| 277   | Poolsville Family Practice                      | Ambulatory        | Mar-12                          | Jul-12   | Jul-12      |          |
| 278   | Potomac Obstetrics and Gynecology               | Ambulatory        | Mar-13                          | Mar-13   | Mar-13      |          |
| 279   | Potomac Physician Associates                    | Ambulatory        | Jun-11                          | Dec-11   | Dec-11      | Oct-12   |
| 280   | Potomac Physicians PA                           | Ambulatory        | Oct-12                          | Oct-12   | Oct-12      | Mar-13   |
| 281   | Potomac Valley Nursing & Wellness Ctr           | Long Term Care    | Jun-12                          | Jun-12   | Jun-12      |          |
| 282   | Prafull Patel, MD, LLC                          | Ambulatory        | Oct-13                          | Nov-13   | Nov-13      |          |
| 283   | Pregnancy Aid Center                            | Ambulatory        | Apr-13                          | Apr-13   | Jun-13      |          |
| 284   | Primary and Alternative Med                     | Ambulatory        | Oct-11                          |          |             |          |
| 285   | Primary Care Coalition of Montgomery County     | Ambulatory        | Nov-11                          | Jun-12   | Jun-12      |          |
| 286   | Prince George's County Health Department        | Government Agency | May-13                          |          |             |          |
| 287   | Prince George's Hospital Center                 | Hospital          | Jul-11                          |          | Apr-13      |          |
| 288   | Progressive Radiology                           | Radiology         | Dec-11                          | May-12   | May-12      |          |
| 289   | Prologue Inc.                                   | Mental Health     | Aug-13                          | Aug-13   | Sep-13      |          |
| 290   | Proto MED                                       | Ambulatory        | Sep-12                          |          |             |          |
| 291   | Proyecto Salud Clinic                           | Ambulatory        | May-13                          | Jun-13   | Nov-13      |          |
| 292   | Psychotherapeutic Services                      | Mental Health     | Aug-13                          | Aug-13   |             | Nov-13   |
| 293   | Quest Diagnostics                               | Laboratory        | Sep-10                          |          |             |          |
| 294   | Radiation Physics                               | Radiology         | Nov-12                          | Aug-13   |             |          |
| 295   | RadNet  | Radiology         | Sep-10                          | Nov-11   | Mar-12      |          |
| 296   | REACH Health Services                           | Ambulatory        | Sep-13                          | Sep-13   | Sep-13      |          |
| 297   | Rheumatology Associates of Baltimore            | Ambulatory        | Jun-13                          | Oct-13   | Oct-13      | Aug-13   |
| 298   | Righttime                                       | Ambulatory        | Mar-11                          | Nov-11   |             |          |
| 299   | Riverside MCO                                   | Payor             | May-13                          |          |             | Jun-13   |
| 300   | Robustiano J. Barrera Jr. MD, PA                | Ambulatory        | Aug-12                          | Aug-12   | Aug-12      |          |
| 301   | Rockville Geriatrics and Palliative Medicine    | Ambulatory        | Mar-12                          | Jan-09   | Jan-09      |          |
| 302   | Rockville Internal Medicine Group               | Ambulatory        | Jul-11                          | Dec-11   | Jul-12      |          |
| 303   | Sante Group                                     | Mental Health     | Nov-13                          |          |             |          |
| 304   | Scaria Mathew, MD                               | Ambulatory        | Feb-13                          | Feb-13   | Feb-13      |          |
| 305   | Scott Mauer, MD                                 | Ambulatory        | Jul-11                          |          |             |          |
| 306   | Season's Hospice                                | Long Term Care    | Jun-12                          | Jul-12   | Jul-12      |          |
| 307   | Seidenberg Protzko Eye Associates               | Ambulatory        | Oct-12                          | Oct-12   | Oct-12      |          |
| 308   | Sellers Family Medicine                         | Ambulatory        | Jul-11                          |          |             |          |
| 309   | Shady Grove Adventist Hospital                  | Hospital          | Nov-10                          | Dec-11   | Dec-11      | Sep-13   |
| 310   | Shady Grove Adventist Radiation Oncology Center | Ambulatory        | Mar-12                          |          |             |          |
| 311   | Shady Grove Radiology                           | Radiology         | Feb-12                          | Dec-12   | Dec-12      |          |
| 312   | Shah Associates                                 | Ambulatory        | Dec-13                          |          |             |          |
| 313   | Sharon M. Messics, MD                           | Ambulatory        | Feb-13                          |          |             | May-13   |
| 314   | Shepherd's Clinic                               | Ambulatory        | Jul-11                          | Nov-11   | Nov-11      |          |
| 315   | Sheppard Pratt Physician's P.A.                 | Mental Health     | Dec-13                          |          |             |          |
| 316   | Sinai Hospital                                  | Hospital          | Oct-10                          | Aug-12   | Sep-12      |          |
| 317   | Smaldore Family Practice                        | Ambulatory        | Apr-13                          | Aug-13   |             |          |
| 318   | Sood Family Medicine                            | Ambulatory        | Mar-12                          | Sep-13   | Sep-13      |          |
| 319   | St. Agnes Hospital                              | Hospital          | Oct-11                          | Dec-12   | Dec-12      |          |
| 320   | Seton Medical Group                             | Ambulatory        |                                 | May-13   | May-13      | Jun-13   |
| 321   | St. Luke's House and Threshold Services United  | Long Term Care    | Jul-12                          | Sep-12   | Sep-12      |          |
| 322   | Steven Lacher MD PA                             | Ambulatory        | Aug-13                          | Aug-13   | Sep-13      |          |
| 323   | Stone Run Family Medicine                       | Ambulatory        | Jun-12                          | Jun-12   | Jun-12      | Oct-12   |

### CRISP Portal & ENS Adoption by Facility

| Count | Organization  | Type           | Portal Participation Agreement* | Training | Portal Live | ENS Live |
|-------|---|----------------|---------------------------------|----------|-------------|----------|
| 324   | Suburban Hospital   | Hospital       | Oct-10                          | Sep-11   | Sep-11      |          |
| 325   | Susquehanna Obstetrics Gynecology & Nurse Midwifery                 | Ambulatory     | Aug-12                          |          |             |          |
| 326   | Tansinda Medical Associates   | Ambulatory     | Oct-12                          |          |             |          |
| 327   | The Center for Breast Health  | Ambulatory     | Sep-13                          | Aug-13   | Oct-13      |          |
| 328   | The Coordinating Center   | Other          | Jul-13                          |          |             | Nov-13   |
| 329   | The Kahan Center For Pain Management                                | Ambulatory     | Sep-13                          |          |             |          |
| 330   | The Lions Center for Rehabilitation and Extended Care               | Long Term Care | May-13                          | Jun-13   | Jul-13      | Jun-13   |
| 331   | The Pediatric Group   | Ambulatory     | Mar-12                          | Jul-12   | Jul-12      | Apr-13   |
| 332   | The Primary Care Group of Maryland                                  | Ambulatory     | Apr-13                          | Apr-13   | Apr-13      |          |
| 333   | Therapeutic Living For Families                                     | Mental Health  | Aug-13                          | Aug-13   | Oct-13      |          |
| 334   | Thomas E. Maslen, MD  | Ambulatory     | Feb-13                          |          |             |          |
| 335   | Total Family Care   | Ambulatory     | Aug-13                          |          |             |          |
| 336   | Total Healthcare  | FQHC           | May-13                          | Jul-13   | Jul-13      | Nov-13   |
| 337   | THC- Division Street  | FQHC           |                                 | Jun-13   | Jun-13      |          |
| 338   | THC-Kirk Avenue   | FQHC           |                                 | Jul-13   | Jul-13      |          |
| 339   | THC- Linden Pediatrics  | FQHC           |                                 | Jul-13   | Oct-13      |          |
| 340   | THC- Men's Health   | FQHC           |                                 |          | Nov-13      |          |
| 341   | THC- Mondawmin  | FQHC           |                                 | May-13   | Jul-13      |          |
| 342   | THC - Saratoga  | FQHC           |                                 | Nov-13   | Nov-13      |          |
| 343   | THC- True Health  | FQHC           |                                 | Jul-13   | Oct-13      |          |
| 344   | THC- Westside   | FQHC           |                                 | Jul-13   | Nov-13      |          |
| 345   | Trusted Health Plan   | Ambulatory     | Oct-13                          |          |             |          |
| 346   | Ulmer Family Medicine   | Ambulatory     | Feb-12                          | May-12   | May-12      | Oct-12   |
| 347   | Union Hospital of Cecil County                                      | Hospital       | Feb-11                          |          | Sep-12      |          |
| 348   | Union Primary Care Elkton   | Ambulatory     | Apr-13                          | Apr-13   |             |          |
| 349   | United Health Care  | Payor          | Sep-13                          |          |             | Nov-13   |
| 350   | University of Maryland Medical Center                               | Hospital       | Aug-11                          | Jul-12   | Jul-12      |          |
| 351   | Pediatrics at the Harbor  | Ambulatory     |                                 |          |             | Jul-13   |
| 352   | University Care Heritage Crossing                                   | Ambulatory     |                                 | May-12   | May-13      | Aug-13   |
| 353   | University Care of Edmondson Villiage                               | Ambulatory     |                                 | Jun-13   | Jun-13      | Aug-13   |
| 354   | University Care of Shipley's Choice                                 | Ambulatory     |                                 | May-12   | Jul-13      | Aug-13   |
| 355   | University Family Medicine Faculty Physicians                       | Ambulatory     |                                 | Apr-13   | Apr-13      | Mar-13   |
| 356   | University of Maryland Cardiology Physicians                        | Ambulatory     | Apr-13                          | Mar-13   | Apr-13      |          |
| 357   | University of Maryland Medical Center Midtown Campus                | Hospital       | Aug-11                          | Feb-13   | Feb-13      |          |
| 358   | University of Maryland Rehabilitation & Orthopedic Institute        | Hospital       | Aug-11                          |          |             |          |
| 359   | University of Maryland Shore Medical Center at Chester River Health | Hospital       | Aug-11                          | Mar-13   | Mar-13      |          |
| 360   | University of Maryland Shore Medical Center at Dorchester           | Hospital       | Aug-11                          |          |             |          |
| 361   | University of Maryland Shore Medical Center at Easton               | Hospital       | Aug-11                          | Mar-13   | Oct-13      |          |
| 362   | University of MD St. Joseph Medical Center                          | Hospital       | Oct-11                          | Mar-12   | May-12      | Aug-12   |
| 363   | Upper Bay Counseling & Support Services                             | Mental Health  | Aug-13                          | Oct-13   | Oct-13      | Dec-13   |
| 364   | Upper Chesapeake Medical Center                                     | Hospital       | Nov-11                          | Aug-12   | Aug-12      |          |
| 365   | Vanessa Allend MD   | Ambulatory     | May-12                          | Apr-12   | Apr-12      |          |
| 366   | Vesta, Inc.   | Mental Health  | Nov-13                          |          |             |          |
| 367   | Village at Rockville  | Long Term Care | Jun-11                          | Nov-11   | Nov-11      |          |
| 368   | Virgo-Carter Pediatrics   | Ambulatory     | Jun-12                          |          |             |          |
| 369   | Vishal Datta, M.D., P.A.  | Ambulatory     | May-13                          | May-13   | Sep-13      |          |



### CRISP Portal & ENS Adoption by Facility

| Count        | Organization                       | Type              | Portal Participation Agreement* | Training   | Portal Live | ENS Live  |
|--------------|------------------------------------|-------------------|---------------------------------|------------|-------------|-----------|
| 370          | Washington Adventist Hospital      | Hospital          | Nov-10                          | Apr-12     | Apr-11      |           |
| 371          | Washington Open MRI                | Radiology         | Nov-12                          |            |             |           |
| 372          | Washington Radiology               | Radiology         | Oct-13                          |            |             |           |
| 373          | Way Station, Inc.                  | Ambulatory        | Mar-13                          |            |             | Apr-13    |
| 374          | Wellspring Family Medicine         | Ambulatory        | Jun-12                          |            |             |           |
| 375          | Western Maryland Health System     | Hospital          | Jan-11                          | Dec-11     | Jan-12      |           |
| 376          | Western Maryland Recovery Services | Mental Health     | Oct-13                          | Oct-13     | Oct-13      |           |
| 377          | Wexford Health Sources             | Ambulatory        | Dec-12                          | Apr-13     | Apr-13      |           |
| 378          | Whitman-Walker Health              | Ambulatory        | Nov-13                          |            |             |           |
| 379          | Wicomico County Health Department  | Government Agency | Jan-13                          | Apr-13     | Apr-13      |           |
| 380          | Willie M. Yu MD PC                 | Ambulatory        | Dec-13                          |            |             |           |
| 381          | Womens Health Specialists          | Ambulatory        | Jul-12                          | Aug-12     | Aug-12      |           |
| 382          | Your Docs In                       | Ambulatory        | Dec-13                          |            |             |           |
| 383          | Zenith Medical Care, LLC           | Ambulatory        | Jul-13                          |            |             |           |
| <b>Total</b> |                                    |                   | <b>349</b>                      | <b>271</b> | <b>255</b>  | <b>72</b> |

**Key Terms and Notes:**

**CRISP Portal:** The CRISP Portal is a standalone system available via the Internet that provides patient health information from Maryland hospitals and other providers who are connected to the HIE. Currently, select information is available via the portal, including patient demographics, laboratory results, radiology reports, discharge summaries, operative and consult notes, and medication fill history

**Encounter Notification System (ENS):** A system that notifies providers when one of their patients has an encounter at a Maryland hospital, which includes patient admission, discharge, and transfer activity

**ENS Live:** The number of organizations receiving ENS alerts

**Green Shading Indicates Completed:** Practices that have completed the category are shaded green with the month indication of completion

**Participation Agreement:** Providers sign a participation agreement with CRISP in order to query the CRISP Portal

**Patient Education:** Education materials are provided to practices to hand out to patients regarding the CRISP Portal before a practice may begin using the Portal

**Portal Live:** An organization has completed the credentialing, legal, and training process and has at least one user approved to use the Portal

**Portal Training:** CRISP provides training to clinical providers in order for participants to learn how to access clinical information in real-time. Training includes information about accessing the Portal and patient education. Training is the first person trained at the facility

\* Although most providers/practices follow a sequence (provider agreement, training, usage), some practices completed the steps in a different order; metrics in chart represent a snapshot of CRISP activities at one point in time and may fluctuate from month to month

\*\*Pharmacies are exempt from signing CRISP Participation Agreement

\*\*\*JHCP Participation Agreement date is merged because there is one Agreement for all JHCP sites

| CRISP Other Projects |   |  |
|----------------------|---|--|
| #                    | Project Name  | Project Description  |
| 1                    | Regional Extension Center Operations                            | Provides support to 1,000 small practices to achieve Meaningful Use by providing direct technical assistance through Management Services Organizations.  |
| 2                    | Direct Secure Messaging   | Provides the ability for an individual clinician or organization to send or receive Secure Email, to support a variety of clinical purposes  |
| 3                    | State Innovation Model (SIM) Reporting and Mapping              | Partnering with the Department of Health and Mental Hygiene (DHMH) on the development of hospital encounter reporting and mapping capabilities to support the community integrated medical home model  |
| 4                    | Health Enterprise Zone (HEZ) Dash-boarding and Mapping          | Leveraging the capabilities developed under the SIM grant, to offer dash-boarding and technical assistance for the HEZ program   |
| 5                    | Prescription Drug Monitoring Program (PDMP)                     | The PDMP will make records of the prescribing and dispensing of controlled dangerous substances available in the CRISP query portal, in an effort to stem the rise of prescription drug abuse and diversion. The PDMP project went live in mid-December.                       |
| 6                    | Health Benefit Exchange (HBE) - Provider Information Management | CRISP is obtaining provider information from the Qualified Health Plans participating in Maryland's HBE and partnering with Optum to produce a verified provider demographics source so that consumers of the HBE can search for health insurance plans by provider name       |
| 7                    | HBE - All Payor Claims Database Unique Identifier               | Relying on the Initiate Master Patient Index, CRISP is attaching a unique patient identifier to carrier eligibility files sent to the MHCC to enable insights into member churn between commercial Qualified Health Plans and Medicaid   |
| 8                    | HBE - Care Summary  | In its early stage, this project would allow a new enrollee in a health plan to choose to send prior clinical records to care coordinators affiliated with their new health plan, such that proactive services may be provided in advance of a new billing history building up |
| 9                    | Public Health - Electronic Lab Reporting                        | To support reporting for the public health meaningful use measure, CRISP is sending a copy of electronic reportable labs to the State via Health Level Seven (HL7), providing assistance with the formatting of the lab messages as necessary                                  |
| 10                   | Public Health - Immunization Reporting                          | Hospitals will send Immunization messages via HL7 to CRISP which will pass them along to the State to a Secure File Transfer Protocol (SFTP) location  |
| 11                   | Public Health - Syndromic Surveillance                          | CRISP will send a copy of existing discharge (A04) and update (A08) messages to DHMH via HL7 to an SFTP location, providing assistance with the formatting of the admission, discharge, and transfer (ADT) messages as necessary   |
| 12                   | Department of Public Safety and Correctional Services Query     | Providing access to the CRISP Query portal for Department of Corrections and users at the locked ward at Bon Secours Hospital  |
| 13                   | Challenge Grant   | Providing financial support to three independent nursing homes so they can invest in health IT. Each grantee is also using the encounter notification service (ENS) to improve transitions of care with hospitals  |
| 14                   | Single Sign On  | Implementing additional HIE capabilities to Medicaid providers, such as single sign on to the HIE  |
| 15                   | DC Hospital Integration   | Working with DC Department of Health Care Finance (DHCF) to support DC acute care hospital connectivity with the CRISP HIE infrastructure  |
| 16                   | Medicaid Outreach DHMH  | Partnered with DHMH for outreach to eligible professionals and hospitals in regards to the Medicaid Meaningful Use Incentives Program in Maryland  |



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